



## **RELEASE ABATEMENT MEASURE PLAN**

**515 SOMERVILLE AVENUE  
RTNS 3-36184 & 3-23606**

**SOMERVILLE, MASSACHUSETTS**

**MARCH 17, 2020**

Prepared For:

Massachusetts DEP  
Northeast Regional Office  
205B Lowell Street  
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On Behalf Of:

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**PROJECT NO. 6735**



March 17, 2020

Massachusetts DEP  
Northeast Regional Office  
205B Lowell Street  
Wilmington, MA 02150

Attention: Bureau of Waste Site Cleanup

Reference: 515 Somerville Avenue, Somerville, Massachusetts;  
Release Abatement Measure Plan, RTN 3-36184 and RTN 3-23606

Ladies and Gentlemen:

Enclosed herewith is a Release Abatement Measure (RAM) Plan for Release Tracking Number (RTNs) 3-36184 and 3-23606 which is associated with the 515 Somerville Avenue property in Somerville, Massachusetts (subject site). Refer to the Project Location Plan (**Figure 1**) for the general site locus.

YEM Somerville Ave, LLC, as the owner of the subject site and an Eligible Person as that term is defined in Chapter 21E, is performing response actions with respect to the subject MCP site. Mr. Jordan Warshaw is listed on the electronically submitted BWSC form as the contact person in connection with this submittal. Please note that Jordan Warshaw is electronically signing the BWSC form as Authorized Signatory for YEM Somerville Ave, LLC, and not individually. This RAM Plan was prepared in accordance with the authorization of YEM Somerville Ave, LLC and is subject to the limitations in **Appendix A**.

Fronting onto Somerville Avenue to the south, the approximate 47,000 square-foot subject site is bounded by Laurel Street to the east, residential properties to the north and northwest, and commercial properties to the southwest. Currently, the subject site is an active construction site, the perimeter of which is fenced.

The area subject to this RAM Plan encompasses a localized area of fill material which occupies the eastern portion of the subject site as well as a previously existing Activity and Use Limitation (AUL) area that occupies the northwestern portion of the subject site. The limits of the subject site and the approximate areas subject to this RAM Plan are shown on **Figure 2**.

The subject site will be developed, the scope of which will include the construction of an approximately 6-story hotel building with a one level ventilated below-grade parking garage. With a footprint of approximately 22,000 square feet in area, the proposed building will occupy the southern portion of the subject site. Excavation to construct the proposed building foundation will extend to approximately 12 feet below ground surface and will be performed within a continuous interlocking sheet pile wall.

The subject site has historically been occupied by various residential, commercial and industrial companies, including an automotive garage, a uniform supply and cleaning company, and a textile cutting and seaming company. The subject site has been vacant



since 2002 and the previously existing building was demolished in 2009. In 2019, the current owner acquired the subject site for redevelopment.

Over the past 30 years, subsurface assessment activities were completed by others which identified releases of oil and/or hazardous materials across the subject site. As a result, Release Tracking Numbers (RTNs) 3-23606, 3-28548, 3-28546, 3-28545 and 3-04350 have been assigned to the subject site, each of which has achieved a Permanent Solution under the MCP. While a majority of the releases were attributable to former underground storage tanks (USTs) which have since been removed off-site and historical filling, a release of asbestos containing materials (ACM) was identified in soil at the northwestern portion of the subject site. With the exception of the area affected by ACM, the previous owners of the subject site filed Class A-2 Response Action Outcome (RAO) Statements indicating that Permanent Solutions were achieved for each of the above referenced MCP sites and a Condition of No Significant Risk exists at the subject site. In 2011, the previous site owner filed a Partial Class A-3 RAO Statement for the area of ACM in soil to which RTN 3-23606 applies.

According to MCP reports prepared by others, response actions were completed at the project site on behalf of the previous site owner which included the removal of up to five (5) USTs which had contained gasoline, fuel oil and Stoddard solvent, as well as small quantities of contaminated soil which had surrounded the former USTs. The ACM affected soil was localized within the northwestern portion of the subject site outside the footprint of the proposed building. While some of the ACM affected soil was excavated and removed off-site as part of MCP response actions, the remaining ACM was covered by a 3-foot layer of clean soil and an Activity and Use Limitation (AUL) was recorded for the localized area at the northwestern portion of the subject site. The AUL restricts the management and handling of the ACM impacted soil as well as maintains the thickness of clean soil covering the area affected by ACM at the northwestern portion of the subject site.

More recently, a subsurface exploration program was completed by Clean Properties, Inc. in November 2019 which detected concentrations of PCBs in excess of the RCS-1 reporting threshold of 1 milligram per kilogram (mg/kg) at the eastern portion of the subject site. Further assessment of the release indicates that the Reportable Concentrations of PCBs are localized to the eastern portion of the subject site at a depth range of 0 to 9 feet below ground surface. Within this layer of affected fill material, the maximum detected concentration of PCBs is 1.9 mg/kg. A Release Notification Form for the PCB release was submitted to the DEP on March 4, 2020, to which Release Tracking Number (RTN) 3-36184 was assigned.

This RAM Plan has been prepared to address the MCP provisions that apply with respect to proposed construction activities at the MCP sites to which RTNs 3-23606 (ACM) and 3-36184 (PCBs) apply. The objective of the RAM will be to excavate and manage the off-site disposal of fill material which has been affected by the release of PCBs documented under RTN 3-36184. In addition, the RAM will include the replacement of the upper 1.5 feet of soil cap material within the RTN 3-23606 AUL area with a 1-foot thickness of subbase material covered by 3.5 inches of bituminous asphalt. Site excavation activities will not extend



below the clean soil cap that was placed over the AUL area associated with RTN 3-23606. The AUL will be revised as necessary to reflect the reduced thickness of the clean soil cap and placement of asphalt pavement.

Of the estimated 10,000 cubic yards of soil anticipated to be generated and removed from the subject site during site redevelopment excavation activities, approximately 1,000 cubic yards of fill material is considered contaminated soil (remediation waste) to which this RAM applies. Excess soils that are affected by RTN 3-36184 and those that are not affected by the release will be managed and/or disposed of off-site in conformance with the provisions of the MCP (Section 40.0032) and the DEP's soil management policies.

A focused Risk Assessment was performed to evaluate levels of the PCBs identified within the area of the RTN 3-36184 MCP site. The purpose of the Risk Assessment was to characterize the nature of risks to construction workers, trespassers, surrounding populations and future residential occupants of the release site. Potential exposure pathways that were evaluated during construction include direct contact, inadvertent soil ingestion, and dermal contact and inhalation of constituents that may become entrained on airborne particulates. The calculated Non-cancer Risks and Cancer Risks over the duration of the RAM do not exceed the Cumulative Hazard Index or ELCR limit of 1 and  $1 \times 10^{-5}$ , respectively. As part of the RAM Plan and construction of the below grade parking garage, the fill material which is affected by RTN 3-36184 will be excavated and removed off-site. As a result, a Condition of No Significant Risk will exist at the RTN 3-36184 site upon completion of the RAM Plan. It is not anticipated that the results of the RAM activities will change the current status of RTN 3-23606 for which Class A-2 and Class A-3 RAO Statements were filed in 2011.

Site activities will be conducted in accordance with OSHA regulations, the soil management procedures of the MCP cited at 310 CMR 40.0030 and a site specific Health and Safety Plan will be developed for use by site workers and to protect the general public. An Environmental Monitoring Plan will be followed to monitor levels of dust in the air, both within the construction site and at the perimeter of the property, to be protective of both site workers and the general public during construction. Full-time environmental monitoring of site conditions will be performed during implementation of the RAM.

The remedial goal of the RAM is to achieve a Permanent Solution and a Condition of "No Significant Risk" and, thus, facilitate filing a Permanent Solution Statement concerning the RTN 3-36184 site. It is anticipated that the RAM will commence following the submission of this RAM Plan in March 2020. As a result of the mass excavation required for the redevelopment of the subject site, all affected soil will be removed under this RAM Plan and thus a Permanent Solution Statement will be filed with the DEP for RTN 3-36184 upon completion of redevelopment construction activities.





Massachusetts DEP  
RTNs 3-36184 & 3-23606  
Page 4, March 17, 2020

We trust that the above is sufficient for your present requirements. Should you have any questions concerning the enclosed, please do not hesitate to call us.

Sincerely,

McPHAIL ASSOCIATES, LLC

A handwritten signature in blue ink, appearing to read "William J. Burns".

William J. Burns, L.S.P.

A handwritten signature in blue ink, appearing to read "Peter J. DeChaves".

Peter J. DeChaves, L.S.P. (As Reviewer)

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## **CONTENTS:**

PURPOSE AND SCOPE.....	1
PARTY PERFORMING RESPONSE ACTIONS.....	1
GENERAL DISPOSAL SITE INFORMATION .....	1
PROPOSED DEVELOPMENT .....	2
SITE HISTORY .....	3
MCP REGULATORY HISTORY .....	3
FOCUSED SITE CHARACTERIZATION .....	7
NATURE AND EXTENT OF CONTAMINATION.....	12
ASSESSMENT FOR IMMINENT HAZARD .....	12
OBJECTIVE, SPECIFIC PLANS AND PROPOSED IMPLEMENTATION SCHEDULE.....	12
FOCUSED RISK ASSESSMENT .....	14
FOCUSED FEASIBILITY STUDY .....	19
REMEDIAL ACTION WASTE .....	20
ENVIRONMENTAL MONITORING PLAN .....	21
FEDERAL, STATE AND LOCAL PERMITS .....	22
SUMMARY AND CONCLUSIONS .....	22

## **FIGURES:**

- FIGURE 1: PROJECT LOCATION PLAN
- FIGURE 2: RELEASE ABATEMENT MEASURE PLAN
- FIGURE 3: SOIL MANAGEMENT PLAN

## **TABLES:**

- TABLE 1A: PID HEADSPACE SCREENING RESULTS by McPhail Associates, LLC
- TABLE 1B: PID HEADSPACE SCREENING RESULTS by Clean Properties, Inc.
- TABLE 2: ANALYTICAL TEST RESULTS – SOIL (McPhail Associates, LLC)
- TABLE 3A: ANALYTICAL TEST RESULTS – SOIL (Clean Properties, Inc. - 2019)
- TABLE 3B: ANALYTICAL TEST RESULTS – SOIL (Clean Properties, Inc. - 2018)



## **APPENDICES:**

APPENDIX A: LIMITATIONS

APPENDIX B: EXPLORATION LOG SHEETS PREPARED BY MCPHAIL ASSOCIATES

APPENDIX C: LABORATORY DATA REPORTS – SOIL (MCPHAIL)

APPENDIX D: LABORATORY DATA REPORT – SOIL (CLEAN PROPERTIES, INC.)

APPENDIX E: LABORATORY DATA REPORT – GROUNDWATER (CLEAN PROPERTIES, INC.)

APPENDIX F: DEP METHOD 3 SHORTFORM AND DUST CALCULATION SHEETS



**PURPOSE AND SCOPE** The purpose of this report by McPhail Associates, LLC (McPhail) is to provide the supporting data and associated information for the submittal of a Release Abatement Measure (RAM) Plan for Release Tracking Numbers (RTNs) 3-23606 and 3-36184 which are associated with the 515 Somerville Avenue property in Somerville, Massachusetts. Refer to the Project Location Plan, **Figure 1**, for the general site locus.

This RAM Plan was prepared in accordance with the authorization of YEM Somerville Ave, LLC and is subject to the limitations in **Appendix A**.

This report was prepared in accordance with the Massachusetts Oil and Hazardous Materials Release Prevention and Response Act (MGL Chapter 21E) and the Massachusetts Contingency Plan (310 CMR 40.0000).

**PARTY PERFORMING RESPONSE ACTIONS** YEM Somerville Ave, LLC, as the owner of the subject site and an Eligible Person as that term is defined in Chapter 21E, is performing response actions with respect to the subject MCP sites. Mr. Jordan Warshaw, is listed on the electronically submitted BWSC form as the contact person in connection with this submittal. Please note that Jordan Warshaw is electronically signing the BWSC form as Authorized Signatory for YEM Somerville Ave, LLC, and not individually.

The contact information is as follows:

YEM Somerville Ave, LLC  
425 Boylston Street  
Boston, MA 02116

Contact: Mr. Jordan Warshaw, Authorized Signatory  
Tel: 617-851-9995

**GENERAL DISPOSAL SITE INFORMATION** Fronting onto Somerville Avenue to the south, the approximate 47,000 square-foot subject site is bounded by Laurel Street to the east, residential properties to the north and northwest, and commercial properties to the southwest. The existing ground surface across the site gradually slopes from the northwest to southeast varying from about Elevation +26 to Elevation +23, respectively. Currently, the subject site is an active construction site, the perimeter of which is fenced.



The area subject to this RAM Plan encompasses a localized area of fill material which occupies the eastern portion of the subject site (RTN 3-36184) as well as a previously existing Activity and Use Limitation (AUL) area (RTN3-23606) that occupies the northwestern portion of the subject site. The limits of the subject site and the approximate areas subject to this RAM Plan are shown on **Figure 2**.

The MCP site is located at longitude and latitude 42°23'0.03" north and 71°06'21.06" west, respectively, and at UTM coordinates 326,648 meters east, and 4,694,488 meters north in zone 19.

Based on an on-line edition of the Massachusetts Geographic Information Systems DEP Phase I Site Assessment Map, the subject site is not located within the boundaries of a Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. According to the Phase I Site Assessment Map, there are no public or private drinking water supply wells, no fish habitats, no habitats of Species of Special Concern or Threatened or Endangered Species within specified distances of the subject site. There are no water bodies or wetland areas at the subject site. The nearest surface water body is the Mystic River, which is located approximately 1.3 miles to the east of the subject site.

No areas designated as solid waste sites (i.e. landfills) are noted on the Assessment Map as being located within 1,000 feet of the release site. According to the Phase I Site Assessment Map, a designated open space identified as the Conway Park is located approximately 250 feet to the northwest of the subject site.

## **PROPOSED DEVELOPMENT**

The proposed development is understood to include construction of a 6-story hotel building that will occupy the southern portion of the subject site. The proposed building will occupy a footprint of approximately 22,000 square feet of which the entire lowest level will consist of a ventilated below grade parking garage. The garage will be accessed via a ramp that will be located along the western side of the building. The first floor will consist of a fitness center, pool, meeting room, lobby and a restaurant. The upper five floors will mainly consist of guest rooms. A driveway, asphalt paved parking lot and landscaped margins will occupy the remainder of the subject site.



The lowest-level-slab is proposed to be at Elevation +17. As a result, bulk excavation and off-site removal of soil to depths ranging from Elevation +9 to +15 will be necessary to construct the building foundations and below grade parking level. As a result, the excavation will be performed within a continuous interlocking sheet pile wall that will be installed around the perimeter of the proposed building.

## **SITE HISTORY**

Given its significant environmental regulatory history, our research into the history of the subject site included a review of MCP reports that were prepared by others for RTNs 3-23606, 3-28548, 3-28546, 3-28545 and 3-04350.

Reportedly, the subject site was originally developed around 1900 at which time it was occupied by several residences. From 1924 to 1950, the central portion of the subject site was developed with a commercial building which was occupied by an automotive repair shop that also dispensed gasoline, which was contained in multiple underground storage tanks (USTs). During this time period, the eastern and western portions of the subject site remained residential.

From 1950 to 1972, the above referenced commercial building was occupied by the Eastern Overall Company, a uniform supply and cleaning company. According to records pertaining to this company's operations at a previous location, Stoddard solvent (white mineral spirits) was used to clean clothing and other textiles. During this time period, additional USTs were installed on the subject site which had contained fuel oil and Stoddard solvent for cleaning the uniforms.

From 1972 to 2002, the commercial building was used for cutting and seaming textile materials to manufacture sports apparel. During this time period, the residential dwellings were removed and converted to parking and the known USTs present at the subject site were reported to have been abandoned in-place. Subsequently, as discussed below, these USTs were removed off-site as part of response actions that were completed in 2009.

## **MCP REGULATORY HISTORY**

Prior to the assessment activities that were recently completed at the subject site, five historical releases of oil and/or hazardous material were reported to which RTNs 3-23606, 3-28548, 3-28546, 3-28545 and 3-04350 were assigned to the subject site. Each of these release sites has achieved a Permanent Solution



under the MCP. While a majority of the releases were attributable to former USTs which have since been removed off-site, a release of asbestos containing materials (ACM) was identified in soil at the northwestern portion of the subject site. With the exception of the area affected by ACM, the previous owners of the subject site filed Class A-2 Response Action Outcome (RAO) Statements indicating that Permanent Solutions were achieved for each of the above referenced MCP sites and a Condition of No Significant Risk exists at the subject site. In 2011, the previous site owner filed a Partial Class A-3 RAO Statement for the area of ACM in soil to which RTN 3-23606 applies.

More recently, a subsurface exploration program was completed by Clean Properties, Inc. (the former LSP) in November 2019 which detected concentrations of PCBs in excess of the RCS-1 reporting threshold of 1 milligram per kilogram (mg/kg) at the eastern portion of the subject site. A Release Notification Form for the PCB release was submitted to the DEP on March 4, 2020, to which Release Tracking Number (RTN) 3-36184 was assigned.

The following is a summary of the regulatory history associated with the historical releases that have been reported with respect to the subject site.

#### RTN 3-4350

In 1990, soils surrounding the former gasoline and solvent USTs that were abandoned in-place and filled with concrete were tested as part of a subsurface investigation. During the investigation, soil sampling exhibited elevated levels of TPH, lead, and VOCs including tetrachloroethene (PCE). In 1993, an Immediate Response Action (IRA) was performed during which approximately 77.86 tons of impacted soil were excavated and recycled into asphalt off-site. Since PCE was not used in the former dry-cleaning operations that were performed at the subject site, MCP reports prepared for this release site indicate that the above referenced VOCs (including PCE) originated from a historical autobody shop which occupied the adjoining property. Following the completion of response actions and based on a Method 3 Risk Characterization, Rizzo Associates submitted a Class A-2 Response Action Outcome (RAO) Statement for the RTN 3-4350 site on November 14, 1995, on behalf of the former property owner, John Solomon International.





#### RTN 3-28545

In 2009, during demolition of the on-site building, a previously unknown 100-gallon hydraulic oil UST was discovered and accidentally ruptured by an excavator, spilling approximately 10 to 20 gallons of oil. The tank and impacted soils were subsequently removed from the site. The subsequent analysis of groundwater samples obtained from on-site monitoring wells indicated that the contamination did not migrate into groundwater. An IRA Plan for response actions required to address this release was submitted to the MassDEP on September 3, 2009; and IRA Status Reports were submitted to the MassDEP in December 2009, July 2010, and January 2011. A Phase I ISI Report and Tier II Classification submittal was filed with the MassDEP for the site on June 9, 2010. A combined IRA Completion Statement and Class A-2 RAO Statement relative to this release was filed on July 1, 2011, which also served as the below referenced Partial RAO which was filed for a portion of RTN 3-23606.

#### RTN 3-28546

According to MCP reports prepared by others, a 72-hour reporting condition was triggered in soil on June 9, 2009, during the removal of USTs that formerly contained Stoddard solvent and fuel oil that were located at the western portion of the subject site. An IRA Plan, which included the cleaning and removal of USTs as well as the excavation and removal of impacted soil, was submitted to the MassDEP on September 3, 2009. IRA Status Reports were submitted in December 2009, July 2010, and January 2011. A Phase I ISI Report and Tier Classification submittal was filed with the MassDEP relative to the RTN 3-28546 site on June 9, 2010. A combined IRA Completion Statement and Class A-2 RAO Statement relative to this release was filed on July 1, 2011, which also served as the below referenced Partial RAO which was filed for a portion of RTN 3-23606.

#### RTN 3-28548

According to MCP reports prepared by others, on June 9, 2009, the DEP was notified of a 2-hour release condition when two 1,000-gallon previously closed-in-place gasoline USTs being removed from the southern portion of the subject site were opened and allowed to remain uncontrolled overnight. An IRA Plan for the removal of the tank and impacted soil was submitted to the MassDEP on September 3, 2009. IRA Status Reports were submitted on December 31, 2009; June 29, 2010; and January 3,



2011, with an IRA Completion Report submitted February 24, 2011. A combined IRA Completion Statement and Class A-2 RAO Statement relative to this release was filed on June 6, 2011.

RTN 3-23606

According to MCP reports prepared by others for this release site, in 2003, a subsurface investigation was performed by others as part of a due diligence assessment which included the installation of seven (7) groundwater monitoring wells across the subject site. The subsequent sampling and analysis of soil and groundwater samples from these explorations indicated concentrations of polycyclic aromatic hydrocarbons (PAHs) and lead in soil which exceeded the applicable RCS-1 reporting thresholds as well as extractable petroleum hydrocarbon (EPH) fraction C9-C18 aliphatics in groundwater which exceeded the RCGW-2 reporting threshold. On February 13, 2004, a RNF was submitted to the DEP by the previous site owner for the Reportable Concentrations of the above referenced constituents to which RTN 3-23606 was assigned.

Subsequently, a RAM Plan was submitted to the DEP in October 2007 to manage the removal of contaminated stockpiled soil and surficial soil, as well as the removal of USTs during the demolition of the formerly existing buildings. Over a 3 year period, the RAM was implemented at the site.

With the exception of the asbestos area, which is discussed below, a Method 3 Risk Characterization was performed for the concentrations of the PAHs, lead and petroleum hydrocarbons in soil and groundwater. The Method 3 Risk Characterization also included residual concentrations of the contaminants of concern associated with RTNs 3-28545 and RTN 3-28546. According to the Partial Class A-2 Response Action Outcome (RAO) that was prepared by Clean Properties, Inc., the results of the Method 3 Risk Characterization determined that residual concentrations of the above referenced contaminants of concern were present at a Condition of No Significant Risk and a Permanent Solution had been achieved for a portion of the release site. As a result a Partial Class A-2 Response Action Outcome (RAO) was filed by Clean Properties, Inc. in July 2011 for a portion of the RTN-23606 site which also included the releases to which RTNs 3-28545 and RTN 3-28546 were assigned.

During a MassDEP Site inspection on June 9, 2009, pieces of asbestos containing floor tile were identified within a localized area



of surficial fill in the northwestern quadrant of the subject site. Reportedly, the area that was affected by the asbestos containing material (ACM) measured approximately 60 feet by 40 feet and was bounded by a remnant warehouse building on the east, a remnant concrete pad to the north, and the concrete retaining wall and fence line to the west. Subsequently additional subsurface explorations were performed by others on behalf of the previous site owner which defined the nature and extent of the ACM contamination. Based upon the results of these assessment activities, an Asbestos Abatement Plan was prepared by others and submitted to the MassDEP BWP on November 17, 2009. Following receipt of a MassDEP waiver, asbestos abatement activities were performed at the site which involved the excavation and off-site removal of surficial soil affected by ACM at the northwestern quadrant of the subject site. According to MCP reports prepared by others, from May 2010 through July 2011, approximately 115 cubic yards of ACM affected soil was excavated and removed off-site to the Waste Management Turnkey Landfill in Rochester, New Hampshire.

Based upon the results of post remediation soil testing, MassDEP BWSC and MassDEP BWP officials concurred that the asbestos condition was eligible for alternative closure under the MCP on December 10, 2010. Subsequently, the ACM affected area was covered with an orange-colored marker fabric and 3.5 feet of clean fill to provide a more effective and longer-term barrier to exposure.

Given the presence of ACM soil, which is located at depths of 3 to 7 feet below ground surface, an AUL was recorded with the South Middlesex Registry of Deeds on August 3, 2011 for the 40 feet by 60 feet area located at the northwestern quadrant of the subject site. The AUL prohibits certain future uses of subject site and restricts activities in the AUL area such that any disturbance of the soil is controlled and does not expose the ACM affected soil for direct contact, ingestion, or inhalation by people at or near the Site. Subsequently, a Class A-3 RAO was filed for the ACM area located at the northwestern quadrant of the subject site in July, 2011.

#### **FOCUSED SITE CHARACTERIZATION**

In accordance with Section 40.0442(3) of the MCP and the DEP Policy for Construction of Buildings in Contaminated Areas, WSC-00-425, dated January 2000, a focused site characterization has been performed to adequately define the nature and degree of contamination associated with the RTN 3-36184 site.



Subsequently in February 2020, McPhail Associates, LLC was retained to provide further soil pre-characterization and L.S.P. services for the project. As part of our soil pre-characterization assessment, a grid was established across the subject site consisting of 17 cells. Subsequently, a subsurface exploration program was performed to pre-characterize fill material within cells where characterization testing was not previously performed as well as to delineate cells exhibiting elevated levels of contaminants.

Refer to the attached **Figures 2** and **3** for the approximate locations of the explorations.

#### Site Hydrogeological Characteristics

Detailed descriptions of the subsurface conditions encountered in the explorations performed in the proposed RAM areas are documented on the exploration logs contained in **Appendix B**. The subsurface conditions encountered in the proposed RAM areas are described below.

Directly beneath the ground surface, borings that were completed at the subject site encountered fill material which extended to depths of 5 to 9 feet below the existing ground surface corresponding to Elevation +20.1 and Elevation +13.5. The fill material generally consists of a loose to very dense, light brown to black, sand with some silt varying to a well-graded mixture of silt, sand and gravel. Below the fill material, the borings encountered a glacial outwash deposit that consisted of a loose to compact, light brown to gray, fine to medium sand with trace to some silt.

The natural glacial outwash is underlain by discontinuous deposits of marine clay and glaciomarine soil that were encountered at depths varying from 19 to 29 feet below the ground surface corresponding to Elevation +3.5 and Elevation -5.3, respectively. The marine clay deposit consists of a firm, gray clay with trace silt and occasional fine sand partings. The glaciomarine deposit consists of a firm to hard, light brown to gray, silty sandy clay, with some gravel.

Groundwater was observed at depths of 9.9 and 9.7 feet below ground surface which correspond to Elevation +15.0 and Elevation +15.2, respectively. According to MCP report prepared by others, groundwater flows in a southerly at the subject site towards Somerville Avenue. It is anticipated that future groundwater levels across the subject site may vary from those reported herein



based on such factors such as normal seasonal changes, runoff during or following periods of heavy precipitation and alterations to existing drainage patterns.

#### Assessment of Soil

As referenced above, a series of subsurface explorations were completed at the subject site by the previous L.S.P. (Clean Properties, Inc.) and by McPhail Associates to pre-characterize soil for off-site removal as well as to evaluate the nature and extent of the PCB release to which RTN 3-36184 was assigned. With the exception VOC and VPH testing, composite samples of fill material and natural soil samples were typically submitted for laboratory testing. In general, discrete samples exhibiting the highest headspace were submitted for VOC and/or VPH analysis.

#### *Headspace Screening*

Soil samples obtained from the explorations performed by McPhail were screened for the presence of Total Volatile Organic Compounds (TVOCs). The TVOC screening results are summarized in **Table 1**. The headspace screening was performed in accordance with DEP's "Jar Headspace Analytical Screening Procedure," Attachment II to the Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, #WSC-94-400. The screening was performed with an Ion Science PhoCheck Photoionization Detector calibrated to benzene equivalent VOCs. The procedures for headspace screening of soil samples that were performed by Clean Properties, Inc. are unknown and are included in **Table 1A** only for reference.

In general, the highest levels of TVOCs were detected in explorations performed within close proximity to the former fuel oil and Stoddard Solvent USTs that were removed in 2009 from the western portion of the subject site. Specifically, the highest levels of TVOCs, which ranged from 29.4 parts per million (ppm) up to 2,012 ppm, were detected in samples of the natural glacial outwash that were obtained at a depth range of 8 to 10 feet below ground surface within test pits TP-7 and TP-10. Levels of TVOCs decreased significantly with distance from these locations generally ranging from 0.1 ppm up to 39.6 ppm across the remainder of the subject site. Samples exhibiting the highest headspace were submitted for laboratory analysis for the presence of VOCs and/or VPH.



### *Laboratory Analysis of Soil*

A total of 28 samples of fill material that were obtained from the February 2020 test pit explorations performed by McPhail were submitted for laboratory analysis for the presence VOCs, SVOCs, TPH, PCBs, MCP-14 metals, TCLP lead, conductivity, pH, corrosivity, ignitability, and reactivity as well as PAHs and/or volatile petroleum hydrocarbons (VPH). Composite samples consisted of 4 to 5 in-situ discrete samples that were obtained from within test pits. With respect to VOC testing representative for each composite sample, the discrete sample with the highest PID headspace screening level was submitted for VOC testing. The results of the laboratory testing are summarized in **Table 2** and the laboratory data reports are included in **Appendix C**.

As part of the November 2018 and November/December 2019 subsurface exploration programs that were completed at the subject site by Clean Properties, Inc., a total of twelve (26) composite samples were submitted for laboratory analysis for the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), PCBs, MCP-14 metals, TCLP lead, conductivity, pH, corrosivity, ignitability, and reactivity. According to Clean Properties Inc., each composite sample consists of 5 discrete samples. One discrete sample from each composite was submitted for laboratory analysis for the presence of VOCs in accordance with USEPA Method 5035. The results of laboratory testing performed by Clean Properties, Inc. are summarized on **Tables 3A** and **3B**. The associated laboratory data reports from Clean Properties, Inc. are provided in **Appendix D**.

With the exception of PCBs present in two fill samples that were obtained from the eastern portion of the subject site, the results of the laboratory analysis performed by McPhail Associates, LLC and Clean Properties, Inc. are similar to or lower than those that were documented in the above referenced Class A-2 and A-3 RAO Statements that were previously filed with the DEP for RTNs 3-23606, 3-28548, 3-28546, 3-28545 and 3-04350. As a result, the recently obtained soil samples exhibiting concentrations of lead, petroleum hydrocarbons, PAHs and VOCs in excess of the RCS-1 reporting thresholds (the contaminants of concern associated with the historical release sites) are considered exempt from DEP notification pursuant to Section 40.0317(17)(b) of the MCP.



During the February 2020 subsurface exploration program performed by McPhail Associates, LLC, ACM testing was performed on three (3) samples of fill material that were obtained to the south of the AUL area at a depth range of 3 to 7 feet below ground surface. These laboratory analytical results did not indicate the presence of asbestos.

In November 2019, Reportable Concentrations of PCBs were identified in fill samples CP-5E3 and CP-5N9 that were obtained by Clean Properties, Inc. from the eastern portion of subject site at depths of 3 feet and 9 feet below ground surface, respectively. Specifically, fill sample CP-5E3 exhibited a concentration of PCB aroclor 1242 at 1.9 mg/kg and CP-5N9 exhibited a concentration of PCB aroclor 1254 at 1.3 mg/kg. Subsequent testing performed on samples of fill material obtained by Clean Properties, Inc. and McPhail Associates, LLC from surrounding explorations TP-9A, TP-9, CP-5, CP5W, CP-5N and CP-5S defined the limits of the PCB release to the west, south, and north as well as the vertical extent of the PCB contamination. Specifically, total PCB concentrations detected in samples obtained from these explorations ranged from none detected in excess of the laboratory reporting limits up to 0.5 mg/kg.

#### Laboratory Analysis - Groundwater

On December 17, 2019, groundwater samples were obtained by Clean Properties, Inc. from monitoring wells identified as West MW, East MW, and Location 1 and submitted for laboratory analysis for parameters required by the Massachusetts Water Resources Authority (MWRA) to pre-characterize water in anticipation of off-site discharge. The results of the laboratory analysis are summarized in a table prepared by Clean Properties, Inc. which is provided in **Appendix E** and also includes the associated laboratory data reports.

In summary, the results of the laboratory analysis did not detect concentrations of PCBs in excess of the applicable RCGW-2 reporting thresholds.

As indicated in the Class A-2 RAO that was prepared by Clean Properties, Inc. for RTN 3-23606, a Permanent Solution was achieved for the historical contaminants of concern that may have affected groundwater.





**NATURE AND EXTENT  
OF CONTAMINATION**

The contaminants of concern that have been identified in soil during pre-characterization activities at the RTN 3-36184 site include PCB aroclors 1242 and 1254. Although a specific source has not been identified, the presence of PCBs is considered attributable to the historical site usage. As referenced above, the site has historically been occupied by commercial establishments since the early 1900s.

Subsurface assessment activities indicate that the release of PCBs associated with RTN 3-36184 is localized to fill material at a depth range of 3 to 9 feet below ground surface. The fill material that is affected by the PCB release occupies a 45 foot by 45 foot area at the eastern portion of the subject site. Groundwater has not been affected by a release of the COCs.

According to the Class A-2 and Class A-3 RAO Statements that were prepared by Clean Properties, Inc. for RTN 3-23606, the contaminants of concern associated with the RTN 3-23606 site are associated with the former USTs containing fuel oil, Stoddard Solvent and gasoline that were removed from the subject site as well as historical fill material containing ash and cinders. In addition, the presence of asbestos is considered attributable to floor tile from a building that was demolished during the early 2000's. The above referenced RAO Statements that were prepared by Clean Properties, Inc. indicate that the release to which RTN 3-23606 applies is contained to within the limits of the subject site.

**ASSESSMENT FOR  
IMMINENT HAZARD**

Given that soil which is affected by the release of PCBs is contained within a secure construction site (i.e. the site is fenced), conditions at the RTN 3-36184 site do not pose an Imminent Hazard to health, safety, public welfare and/or the environment as defined in Sections 40.0321 and 40.0950 of the MCP.

**OBJECTIVE, SPECIFIC  
PLANS AND  
PROPOSED  
IMPLEMENTATION  
SCHEDULE**

This RAM Plan has been prepared to address the MCP provisions that apply with respect to proposed construction activities at the MCP sites to which RTNs 3-23606 and 3-36184 apply. The objective of the RAM will be to excavate and manage the off-site disposal of fill material which has been affected by the release of PCBs documented under RTN 3-36184. In addition, the RAM will include the replacement of the upper 1.5 feet of soil cap material within the RTN 3-23606 AUL area with a 1-foot thickness of subbase material covered by 3.5 inches of bituminous asphalt. The approximate area of the RAM corresponds to the area of the



AUL located at the northwestern quadrant of the subject site as well as the limits of the PCB release in soil located at the eastern portion of the subject site, as shown on **Figure 2**.

The RAM will be performed concurrently with site redevelopment. It is anticipated that construction activities related to the RAM will commence in March of 2020 shortly after the submission of this RAM Plan and are anticipated to be completed within 1 year.

It should be noted that the contaminated soil, as well as non-impacted soil located within the footprint of the proposed development, will be excavated and removed from the subject site. Site excavation activities will not extend below the clean soil cap that was placed over the AUL area associated with RTN 3-23606.

Of the estimated 10,000 cubic yards of soil anticipated to be generated and removed from the subject site during site redevelopment excavation activities, approximately 1,000 cubic yards of soil is considered contaminated (remediation waste) to which this RAM applies.

Excess soils that are affected by RTN 3-36184, and those that are not, will be managed and/or disposed of off-site in conformance with the provisions of the MCP (Section 40.0032), the DEP's Similar Soils Provision Guidance dated October 2, 2013, WSC#-13-500, the Reuse and Disposal of Contaminated Soil at Massachusetts Landfills Policy #COMM-97-001 and the Interim Policy on the Re-Use of Soil or Large Reclamation Projects Policy #COMM-15-01.

Approximately 900 cubic yards of fill material exhibiting TCLP levels of lead that are considered to be a characteristic hazardous waste will require stabilization treatment prior to off-site removal. If lead stabilization treatment is successfully performed on the affected fill, then the relevant material can be disposed of at an out-of-state lined landfill as non-hazardous daily cover.

An Environmental Monitoring Plan will be followed for monitoring levels of dust and TVOCs in the air, both within the construction site and at the perimeter of the subject site, to be protective of both site workers and the general public during construction. A site-specific Health and Safety Plan will be implemented during the RAM to limit exposure for site workers and will include full-time environmental monitoring of site conditions. Direct contact with contaminated materials and inhalation of contaminated dust will



be managed under the Health and Safety Plan and proposed mitigative measures.

If necessary, soil that is excavated and temporarily stockpiled pending off-site disposal will be covered at all times of non-intrusive work with polyethylene sheets.

In consideration of dewatering that will be required during construction, a Construction Site Dewatering Discharge Permit application has been filed with the MWRA. Effluent samples will be obtained and tested in accordance with the MWRA discharge permit to be issued for the subject site.

Post remediation testing of the underlying natural soil and soil located along the sidewalls of the excavation will be performed to assess residual levels of PCBs at the site.

Given the history of previous site development, it is possible, although currently unlikely, that unknown USTs may be present at the subject site. Accordingly, this RAM Plan includes the removal and disposal of unknown underground storage tanks that may be encountered during construction as a conservative precaution.

The analytical test results from subsurface explorations and post remediation testing will be used in a Risk Characterization. Ultimately, the goal of the RAM is to achieve a Condition of "No Significant Risk", and thus, facilitate filing a Permanent Solution Statement for RTN 3-36184. It is not anticipated that the results of the RAM activities will not change the current status of RTN 3-23606 for which Class A-2 and Class A-3 RAO Statements were filed in 2011.

## **FOCUSED RISK ASSESSMENT**

In accordance with the provisions of the January 2000 DEP Policy for Building Construction in Contaminated Areas (Policy WSC-00-425) and Section 40.0442 of the MCP, a focused risk assessment was performed on materials within and adjacent to the footprint of the proposed building to characterize the nature of risk to construction workers, surrounding populations and future occupants of the building, and to ensure that such risks are within limits permitted by the MCP.

### Potential Receptors

Once excavation for the proposed building commences, receptors will include site workers, possible trespassers, passers-by,



neighboring workers and residents. The construction site is completely fenced-in. Construction activities will be performed in accordance with a site-specific Health and Safety Plan. Passers-by and trespassers will have a low frequency and low intensity of use, and children are likely to be infrequent visitors to the area. Potential receptors under future conditions will therefore include adults and children as occupants and as occasional visitors to the subject site.

The proposed development will include a below grade ventilated parking garage that will occupy the entire proposed building footprint. The depth of excavation is estimated to range between 9 to 15 feet below existing ground surface and will include removal of all the PCB soils to which RTN 3-36184 applies. While a majority of the residually contaminated soil associated with RTN 3-23606 will be removed off-site, some levels of contamination may remain in soil located outside the footprint of the building. In particular, the excavation activities will not disturb the ACM soil within the AUL area and therefore the clean soil cap and AUL will remain in place after construction to restrict exposure to the ACM soil.

#### Contaminants of Concern

Contaminants of concern (COCs) at the RTN 3-36184 site are considered to be PCB aroclor 1242 and PCB aroclor 1254.

As referenced above, recent subsurface assessment activities detected concentrations of lead, petroleum hydrocarbons, PAHs and VOCs in excess of the RCS-1 reporting thresholds (the COCs associated with 3-23606, 3-28548, 3-28546, 3-28545 and 3-04350) which are considered exempt from DEP notification pursuant to Section 40.0317(17)(b) of the MCP. The recently detected concentrations of these COCs are also consistent with those included in the Method 3 Risk Characterization which was used to support the Class A-2 RAO filed by Clean Properties, Inc. in 2011 for the above referenced release sites. The results of the previously completed Method 3 Risk Characterization concluded that a Condition of No Significant Risk exists for the current and future use of the subject site.



### Potential Exposure Pathways

#### a. During Construction Activities

Potential pathways for exposure to the COCs in soil at the site during construction include direct contact (inadvertent soil ingestion and dermal contact) and inhalation of constituents that become entrained on airborne particulates. It should be noted that essentially all of the soil excavation will be performed utilizing heavy excavating equipment.

Although the subject site is surrounded by a chain link fence to restrict access to only construction personnel, it is assumed that a trespasser could access the construction site during non-working hours and could be exposed to the contaminated soil via dermal contact. In addition, nearby workers, residents and passers-by also have the potential to contact contaminated soil via the inhalation of compounds that become entrained on airborne particulates.

#### b. Post Construction Activities

Excavation associated with site redevelopment will remove all soil affected by a release of PCBs. Further, the proposed development includes construction of a ventilated below grade parking garage which will occupy the entire MCP site area. As a result, direct contact with the release of PCBs by future site receptors will be eliminated.

### Exposure Assessment

The maximum detected concentration of total PCBs at 1.9 mg/kg was utilized as the Exposure Point Concentrations (EPCs) in the focused risk characterization. Cumulative Cancer and non-cancer risks at the MCP site were calculated using the DEP Short Forms for Human Health Assessment that apply to construction workers and trespassers for working days over the anticipated duration of the RAM. With the exception of the airborne particulate value and exposure duration, the default settings contained in the Shortforms were not altered as part of the exposure assessment. The exposure to PM10 for total airborne particulates was assessed using a value of 0.15 milligrams per meter cubed (mg/m<sup>3</sup>) for a 24-hour period.

For COCs identified as carcinogens, the Excess Lifetime Cancer Risk (ELCR) for each compound is calculated by multiplying the



applicable Lifetime Average Daily Dose (LADD) by the applicable Cancer Slope Factor (CSF). The ELCR for each of the identified exposure routes is summed for the construction worker and trespasser receptor scenarios. The cumulative ELCR for each receptor is compared to the MCP cumulative Cancer Risk Limit of  $1 \times 10^{-5}$ . To estimate the non-cancer risk for the duration of the RAM, the Hazard Index for each compound was calculated by dividing the Average Daily Dose (ADD) by the applicable Reference Dose (RfD). The Hazard Indices for all exposure routes, media, and data sets are summed for each exposure scenario. This sum results in the Total Site Hazard Index (HI) for each receptor and is compared with the MCP Cumulative Non-cancer Risk Limit of 1.

As indicated in the DEP Shortforms for Human Health Risk Assessment that are included in **Appendix F**, the Cumulative ELCR calculated for both construction workers and trespassers were below the MCP cumulative Cancer Risk Limit of  $1 \times 10^{-5}$ . In addition, the calculated Total Site Hazard Index values for construction workers and trespassers do not exceed the MCP Cumulative Noncancer Risk Limit of 1.

The effects to nearby residents from exposure to airborne particulates that may become affected by the COCs was further assessed using equations referenced in "Real-Time Air Monitoring at Construction and Remediation Sites to Estimate Risks of Contaminated Dust Migration" dated October 1997 written by Cynthia Weidner, John Fitzgerald, and Maureen Vallatini, of the Massachusetts Department of Environmental Protection. Based on our assessment, the most conservative estimate of  $PM_{10}$  is generated when assessing the cancer risks to a child as a result of lead. The equations used in determining the action level for dust monitoring are provided in **Appendix F**.

As indicated above, US EPA's NAAQS for  $PM_{10}$  particulates are  $0.15 \text{ mg/m}^3$  for a 24-hour average and  $0.050 \text{ mg/m}^3$  for an annual average. Because the NAAQS standards are more stringent than the calculated site-specific action level for PCBs, a conservative dust monitoring action level of  $0.15 \text{ mg/m}^3$  sustained over 15 minutes at the fence line has been established for performance of the RAM to be protective of possible exposures to total particulates in air. If dust suppression activities are implemented at the indicated action level during the work day, the 24-hour average for lead and  $PM_{10}$  for total particulates is not likely to be exceeded.



### Provisions to Prevent Exposure to Contaminated Soil

As discussed above, the perimeter of the subject site is surrounded by a chain link fence for the duration of construction activities. Once the RAM Plan excavation is completed, no exposure will occur to future occupants of the site since all of the PCB affected soils will have been removed.

While a majority of the residually contaminated soil associated with RTN 3-23606 will be removed off-site, some levels of contamination may remain in soil located outside the footprint of the building. In particular, the excavation activities will not disturb the ACM soil within the AUL area and therefore the clean soil cap and AUL will remain in place after construction to restrict exposure to the ACM soil.

#### a. Direct Contact During Construction

During construction, access to the subject site will be limited by a fence and locked gate. Surrounding populations are therefore unlikely to come into direct contact with contaminated soil. Essentially all of the soil excavation will be performed utilizing heavy equipment, thereby limiting a construction worker's direct contact with site soils. However, during localized excavation work, some of the construction workers may be exposed to direct contact with contaminated soil for brief periods of time. Direct contact with soil in the immediate work area will be addressed under the Contractor's site-specific Health and Safety Plan.

If limited stockpiling of the excavated soil is required prior to off-site transportation, the stockpiles will be placed on and covered with polyethylene sheeting to minimize direct contact and dust migration.

Since excavation for construction of the new building will remove the soil affected by a release of PCBs, this exposure pathway will be eliminated after construction.

The excavation activities will not disturb the ACM soil within the AUL area and therefore the clean soil cap and AUL will remain in place after construction to restrict exposure to the ACM soil.

#### b. Inhalation During and After Construction

Workers and surrounding populations may be exposed to windblown dust and TVOC vapors containing COCs during





construction. To address the possible exposure to particulates by inhalation during construction, dust monitoring will be performed by McPhail Associates and mitigative measures will be implemented as outlined in the Environmental Monitoring Plan below.

Inhalation of dust and TVOCs after construction will be eliminated by the removal of affected soils and the construction of the ventilated below grade parking garage which will occupy the entire building footprint.

#### Provisions to Prevent Exposure to Contaminated Groundwater

Analytical testing has not indicated a release of PCBs in groundwater. The potential for direct human contact with groundwater at this time is limited.

Dewatering will be performed within the limits of the excavation as needed; hence site excavation will be performed in the dry. Therefore, it is our opinion that no special provisions are required to limit exposure to groundwater.

In consideration of dewatering that may be required during construction, a Construction Dewatering Discharge Permit application has been filed with the MWRA. Effluent samples will be obtained and tested in accordance with the MWRA discharge permit to be issued for the subject site.

#### **FOCUSED FEASABILITY STUDY**

Based on the current plans for redevelopment, soil that is affected by the release of PCBs at the site will be excavated during the construction of the proposed building foundation. These materials will be removed off-site in accordance with Section 40.0030 of the MCP as well as applicable DEP policies. It is further anticipated that the results of the RAM will reduce concentrations of PCBs to below the Method 1 S-1 risk characterization standards.

Therefore, upon completion of the RAM excavation and subsequent construction, it is anticipated that levels of PCBs will be reduced to Background or to concentrations which are considered "approaching" Background.

As referenced above, recent subsurface assessment activities detected concentrations of lead, petroleum hydrocarbons, PAHs and VOCs in excess of the RCS-1 reporting thresholds (the COCs associated with 3-23606, 3-28548, 3-28546, 3-28545 and 3-



04350) which are considered exempt from DEP notification pursuant to Section 40.0317(17)(b) of the MCP. The recently detected concentrations of these COCs are also consistent with those included in the Method 3 Risk Characterization which was used to support the Class A-2 RAO filed by Clean Properties, Inc. in 2011 for the above referenced release sites. The results of the previously completed Method 3 Risk Characterization concluded that a Condition of No Significant Risk exists for the current and future use of the subject site. As indicated above, excavation activities associated with redevelopment will not disturb ACM soil that is located beneath the soil cap within the AUL area at the northwestern quadrant of the subject site.

Given that a Condition of No Significant Risk exists for RTNs 3-23606, 3-28548, 3-28546, 3-28545 and 3-04350, the benefits of additional remedial actions to achieve or approach background for COCs associated with these historical release sites would be considered unnecessary to justify the costs of those actions.

## **REMEDICATION WASTE**

Off-site re-use and disposal of contaminated soils are governed by the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000. In general, soils exhibiting contaminant concentrations above the RCS-1 reportable levels and/or background levels for natural soil contained in the MCP are considered regulated for off-site disposal and require the use of either a Bill of Lading, Material Shipping Record or Uniform Hazardous Waste Manifest.

Additionally, off-site re-use and disposal of excavated soils, including urban fill, are governed by DEP Policy #WSC-94-400 entitled "Interim Remediation Waste Management Policy for Petroleum Contaminated Soils", dated April 21, 1994; DEP Policy #COMM-97-001 entitled "Reuse and Disposal of Contaminated Soils at Massachusetts Landfills", dated August 15, 1997; and DEP Policy #COMM-15-01 entitled "Interim Policy on the Re-use of Soil for Large Reclamation Projects", dated August 28, 2015.

Affected soil excavated under this RAM Plan has been analytically tested for disposal parameters and will be managed in accordance with the MCP, and applicable DEP and EPA policies. Of the estimated 10,000 cubic yards of soil anticipated to be generated and removed from the subject site during site redevelopment excavation activities, approximately 1,000 cubic yards of fill material is considered contaminated soils (remediation waste) to which this RAM applies.



Excess soils that are affected by RTNs 3-36184 and 3-23606, and those that are not remediation waste will be managed and/or disposed of off-site in conformance with the provisions of the MCP (Section 40.0032), the DEP's Similar Soils Provision Guidance dated October 2, 2013, WSC#-13-500, the Reuse and Disposal of Contaminated Soil at Massachusetts Landfills Policy #COMM-97-001 and the Interim Policy on the Re-Use of Soil or Large Reclamation Projects Policy #COMM-15-01.

## **ENVIRONMENTAL MONITORING PLAN**

In consideration of the provisions of the January 2000 DEP Policy for Building Construction in Contaminated Areas (Policy WSC-00-425) and Section 40.0442 of the MCP, a focused monitoring and remedial program will be conducted to eliminate unnecessary risks to construction workers, surrounding populations and/or future building occupants.

Potential receptors who may be exposed to site contaminants during performance of the RAM are considered to be construction site workers, trespassers and the general public (nearby office workers and residents). Access to the MCP sites will be restricted to the personnel involved in construction activities. Site activities will be conducted in accordance with OSHA regulations, the soil management procedures of the MCP cited at 310 CMR 40.0030, and a site-specific Health and Safety Plan to be developed for use by site workers and to protect the general public.

The RAM work will be performed under the monitoring of McPhail Associates, LLC. To prevent exposures to the general public during excavation, monitoring for dust in air will be performed. Dust monitoring will be performed utilizing tripod mounted DustTrak II aerosol monitors. The representative from McPhail will monitor ambient TVOC concentrations while monitoring earthwork activities at the subject site. Monitoring for TVOCs will also be conducted by McPhail with a Mini RAE 3000 Photoionization Detector (PID).

The action levels for VOCs at which mitigative measures will be implemented will be 5 ppm total volatile organics above background. If field perimeter readings meet or exceed the above referenced action levels for more than 15 minutes at a time, mitigative measures will be implemented.

Based upon the results of a focused Risk Assessment that is summarized above, a time weighted average dust monitoring action level of 0.15 mg/m<sup>3</sup> sustained over a 15-minute duration



will be the established threshold during performance of the soil excavation activities. If dust suppression activities are implemented at the indicated action level during the work day, the 24-hour average is not likely to be exceeded. Mitigative measures may include spraying dry soils with water or a surfactant agent prior to excavation, covering stockpiles with polyethylene, limiting the excavation area or ceasing excavation operations during high wind conditions.

Material removed from the excavation may be temporarily stockpiled at the subject site; if so, the soil will be placed on and covered with polyethylene sheeting pending off-site recycling/disposal at the appropriate facilities.

#### **FEDERAL, STATE AND LOCAL PERMITS**

A Construction Dewatering Discharge Permit application will be submitted to the MWRA, for temporary construction dewatering, to be discharged into the municipal combine storm drain and sewer system beneath the roadways that bound the subject site. All construction dewatering will pass through a treatment system consisting of a sedimentation tank and bag filters prior to discharge.

With the exception of the permit referenced above, no federal, state or local environmental related permits are currently believed to be necessary for conducting the RAM.

#### **SUMMARY AND CONCLUSIONS**

This RAM Plan has been prepared to address the MCP provisions that apply with respect to proposed construction activities at the MCP sites to which RTNs 3-23606 and 3-36184 apply. The objective of the RAM will be to excavate and manage the off-site disposal of fill material which has been affected by the release of PCBs documented under RTN 3-36184. In addition, the RAM will include the replacement of the upper 1.5 feet of soil cap material within the RTN 3-23606 AUL area with a 1-foot thickness of subbase material covered by 3.5 inches of bituminous asphalt. Site excavation activities will not extend below the clean soil cap that was placed over the AUL area associated with RTN 3-23606.

Of the estimated 10,000 cubic yards of soil anticipated to be generated and removed from the subject site during site redevelopment excavation activities, approximately 1,000 cubic yards of fill material is considered contaminated soil (remediation waste) to which this RAM applies. Excess soils that are affected by RTN 3-36184 and those that are not affected by the release



will be managed and/or disposed of off-site in conformance with the provisions of the MCP (Section 40.0032) and the DEP's soil management policies.

A focused Risk Assessment was performed to evaluate levels of the PCBs identified within the area of the RTN 3-36184 MCP site. The purpose of the Risk Assessment was to characterize the nature of risks to construction workers, trespassers, surrounding populations and future residential occupants of the release site. Potential exposure pathways that were evaluated during construction include direct contact, inadvertent soil ingestion and dermal contact and inhalation of constituents that may become entrained on airborne particulates. The calculated Non-cancer Risks and Cancer Risks over the duration of the RAM do not exceed the Cumulative Hazard Index or ELCR limit of 1 and  $1 \times 10^{-5}$ , respectively. As part of the RAM Plan and construction of the below grade parking garage, the fill material which is affected by RTN 3-36184 will be excavated and removed off-site. As a result, a Condition of No Significant Risk will exist at the RTN 3-36184 site upon completion of the RAM Plan. It is not anticipated that the results of the RAM activities will change the current status of RTN 3-23606 for which Class A-2 and Class A-3 RAO Statements were filed in 2011.

Site activities will be conducted in accordance with OSHA regulations, the soil management procedures of the MCP cited at 310 CMR 40.0030 and a site-specific Health and Safety Plan will be developed for use by site workers and to protect the general public. An Environmental Monitoring Plan will be followed to monitor levels of dust in the air, both within the construction site and at the perimeter of the property, to be protective of both site workers and the general public during construction. Full-time environmental monitoring of site conditions will be performed during implementation of the RAM.

The remedial goal of the RAM is to achieve a Permanent Solution and a Condition of "No Significant Risk" and, thus, facilitate filing a Permanent Solution Statement concerning the RTN 3-36184 site.

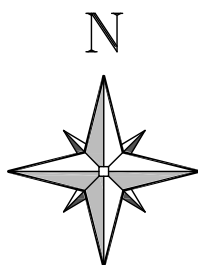
It is anticipated that the RAM will commence following the submission of this RAM Plan in March 2020. As a result of the mass excavation required for the redevelopment of the subject site, all affected soil will be removed under this RAM Plan and thus a Permanent Solution Statement will be filed with the DEP for RTN 3-36184 upon completion of redevelopment construction activities.



FIGURE I



Geotechnical and  
Geoenvironmental Engineers  
2269 Massachusetts Avenue  
Cambridge, MA 02140  
617/868-1420  
617/868-1423 (Fax)  
www.mcphailgeo.com



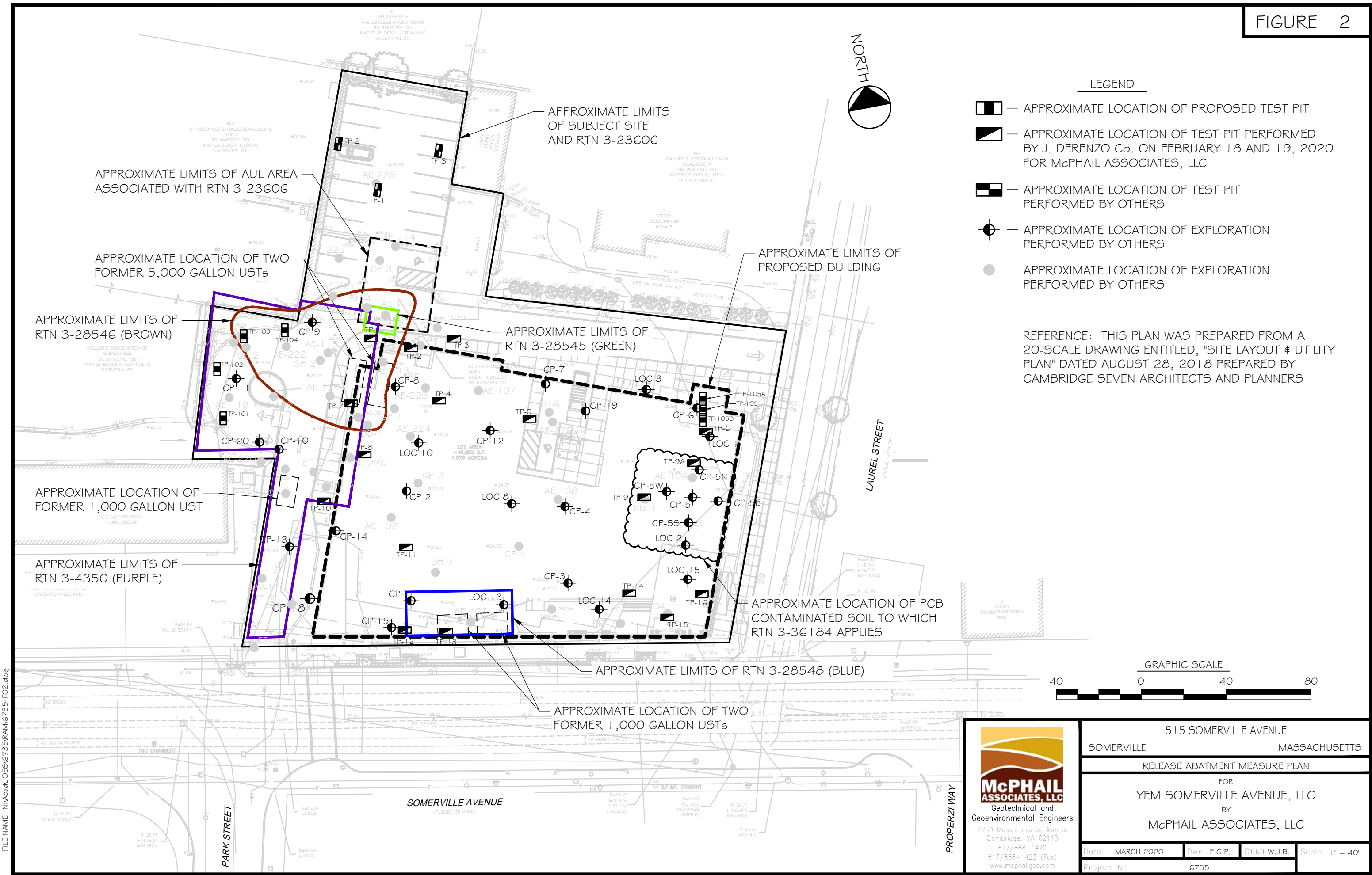
SCALE 1:25,000

## PROJECT LOCATION PLAN

515 SOMERVILLE AVENUE

SOMERVILLE

MASSACHUSETTS





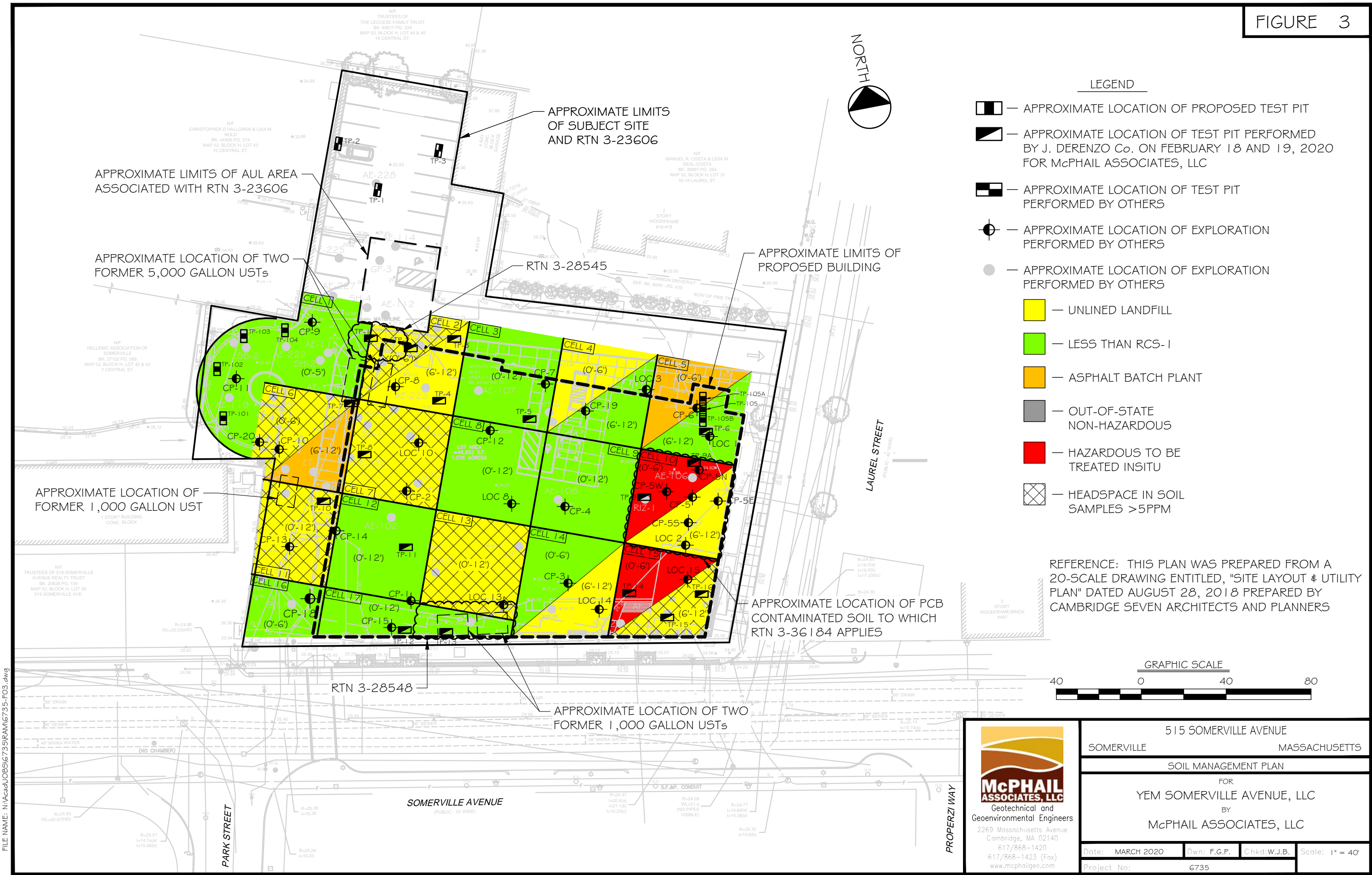


TABLE 1A  
PID HEADSPACE READINGS - TOTAL VOLATILE ORGANIC COMPOUNDS  
(McPhail Associates, LLC)

515 Somerville Avenue  
Somerville, MA  
Project No. 6735

EXPLORATION NO.	SAMPLE NO.	SAMPLE DEPTH	SAMPLE TYPE	PID READING (ppm)
TP-1	S1	0-1	URBAN FILL	6.2
	S2	1.0-2.0	URBAN FILL	7.8
	S3	2.0-3.0	URBAN FILL	3.6
	S4	3.0-4.0	URBAN FILL	3.1
	S5	4.0-5.0	URBAN FILL	4.0
	S6	5.0-6.0	SAND	89.0
	S7	6.0-7.0	SAND	32.7
TP-2	S1	0-1	URBAN FILL	4.4
	S2	1.0-2.0	SAND	7.0
	S3	2.0-3.0	SAND	39.7
	S4	3.0-4.0	SAND	4.2
	S5	4.0-5.0	SAND	4.4
	S6	5.0-6.0	SAND	3.8
	S7	6.0-7.0	SAND	5.2
TP-3	S1	0-1	URBAN FILL	4.8
	S2	1.0-2.0	URBAN FILL	3.9
	S3	2.0-3.0	SAND	4.0
	S4	3.0-4.0	SAND	3.7
	S5	4.0-5.0	SAND	4.2
	S6	5.0-6.0	SAND	5.3
	S7	6.0-7.0	SAND	4.5
TP-4	S1	0-2	URBAN FILL	1.3
	S2	2.0-4.0	URBAN FILL	0.1
	S3	4.0-6.0	SAND	0.2
	S4	6.0-8.0	SAND	4.0
	S5	8.0-10.0	SAND	2.3
	S6	10.0-12.0	SAND	1.4
TP-5	S1	0-2	URBAN FILL	2.5
	S2	2.0-4.0	URBAN FILL	2.1
	S3	4.0-6.0	SAND	1.5
	S4	6.0-8.0	SAND	2.3
	S5	8.0-10.0	SAND	4.5
	S6	10.0-12.0	SAND	2.7
TP-6	S1	0-2	URBAN FILL	3.9
	S2	2.0-4.0	URBAN FILL	0.5
	S3	4.0-6.0	URBAN FILL	0.3
	S4	6.0-8.0	SAND	0.8
	S5	8.0-10.0	SAND	0.7
	S6	10.0-12.0	SAND	0.6
TP-7	S1	0-2	URBAN FILL	3.0
	S2	2.0-4.0	SAND	38.2
	S3	4.0-6.0	SAND	27.0
	S4	6.0-8.0	SAND	5.1
	S5	8.0-10.0	SAND	979.2
	S6	10.0-12.0	SAND	2012.0
TP-8	S1	0-2	URBAN FILL	1.9
	S2	2.0-4.0	URBAN FILL	1.2
	S3	4.0-6.0	SAND	1.0
	S4	6.0-8.0	SAND	2.0
	S5	8.0-10.0	SAND	1.7
	S6	10.0-12.0	SAND	4.5
TP-9	S1	0-2	URBAN FILL	0.4
	S2	2.0-3.0	URBAN FILL	0.6
	S3	3.4-5	URBAN FILL	0.8
	S4	4.5-6	SAND	0.3
	S5	6.0-8.0	SAND	0.4
	S6	8.0-9.0	SAND	0.3
TP-9A	S1	0-2	URBAN FILL	0.3
	S2	2.0-3.0	URBAN FILL	0.2
	S3	3.4-5	SAND	0.1
	S4	4.5-6	SAND	0.2
	S5	6-7.5	SAND	0.4
	S6	7.5-9	SAND	0.5

TABLE 1A  
PID HEADSPACE READINGS - TOTAL VOLATILE ORGANIC COMPOUNDS  
(McPhail Associates, LLC)

515 Somerville Avenue  
Somerville, MA  
Project No. 6735

EXPLORATION NO.	SAMPLE NO.	SAMPLE DEPTH	SAMPLE TYPE	PID READING (ppm)
TP-10	S1	0-2	URBAN FILL	1.8
	S2	2.0-4.0	URBAN FILL	2.4
	S3	4.0-6.0	SAND	8.1
	S4	6.0-8.0	SAND	1.1
	S5	8.0-10.0	SAND	29.4
	S6	10.0-12.0	SAND	1452.0
TP-11	S1	0-2	URBAN FILL	3.0
	S2	2.0-4.0	URBAN FILL	4.0
	S3	4.0-6.0	SAND	3.8
	S4	6.0-8.0	SAND	3.3
	S5	8.0-10.0	SAND	2.8
	S6	10.0-12.0	SAND	2.8
TP-12	S1	0-2	URBAN FILL	1.5
	S2	2.0-4.0	URBAN FILL	3.8
TP-12	S3	4.0-6.0	URBAN FILL/SAND	1.6
	S4	6.0-8.0	SAND	2.3
	S5	8.0-10.0	SAND	2.5
TP-13	S1	0-2	URBAN FILL	2.6
	S2	2.0-4.0	URBAN FILL	2.2
	S3	4.0-6.0	URBAN FILL/SAND	2.6
	S4	6.0-8.0	SAND	3.7
	S5	8.0-10.0	SAND	2.7
TP-14	S1	0-2	URBAN FILL	1.7
	S2	2.0-3.0	URBAN FILL	2.1
	S3	3.0-4.0	URBAN FILL	2.1
	S4	4.0-5.0	URBAN FILL	3.1
	S5	5.0-6.0	SAND	1.8
TP-15	S1	0-2	URBAN FILL	1.2
	S2	2.0-4.0	URBAN FILL	2.3
	S3	4.0-5.0	URBAN FILL	2.0
	S4	5.0-6.0	SAND	2.9
TP-16	S1	0-1	URBAN FILL	2.2
	S2	1.0-2.0	URBAN FILL	5.7
	S3	2.0-3.0	URBAN FILL	4.3
	S4	3.0-4.0	URBAN FILL	20.0
	S5	4.0-5.0	URBAN FILL	3.2
	S6	5.0-6.0	URBAN FILL	3.2

TABLE 1B  
PID HEADSPACE READINGS - TOTAL VOLATILE ORGANIC COMPOUNDS  
(Clean Properties, Inc.)  
  
515 Somerville, Avenue  
Somerville, MA  
Project No. 6735

EXPLORATION NO.	SAMPLE NO.	DEPTH FT.	SAMPLE TYPE	PID READING (ppm)
AE-102		1-2'		ND
		4-5'		ND
		6-7'		ND
		9-10'		ND
		12-13'		ND
		15-16'		ND
AE-103		1-2'		ND
		4-5'		ND
		6-7'		ND
		9-10'		ND
		12-13'		ND
		15-16'		ND
AE-104		1-2'		ND
		4-5'		ND
		6-7'		ND
		9-10'		ND
		12-13'		ND
		15-16'		ND
AE-107		1-2'		ND
		3-4'		ND
		4-5'		ND
		7-8'		ND
		9-10'		ND
		12-13'		ND
		15-16'		ND
AE-108		1-2'		ND
		3-4'		ND
		5-6'		ND
		6-7'		ND
		8-9'		ND
		11-12'		ND
		15-16'		ND
AE-109		1-2'		ND
		3-4'		ND
		5-6'		ND
		7-8'		ND
		11-12'		226
		15-16'		178
AE-111A		0-3'		ND
		6-8'		ND
AE-112		0-3'		2
		6-7'		1,239
AE-113		0-3'		57
		3-5'		387
		5-6'		126
		7-9'		1,074
		11-12'		96
		12-13'		19
		14-15'		2
AE-114		0-3'		198
		7-8'		83
AE-115		0-3'		168
		7-8'		2,000
AE-223		0-2'		ND
		4-6'		5
		6-7'		31
		13-14'		19
AE-224		0-2'		ND
		5-6'		26
		6-7'		47
		13-14'		38
		14-15'		34
AE-225		8-10'		ND
		10-12'		ND
AE-226		0-2'		ND
		2-4'		59
		6-7'		162
		9-10'		837
		12.5		1268
		11-12'		ND
		15-16'		ND

TABLE 1B  
PID HEADSPACE READINGS - TOTAL VOLATILE ORGANIC COMPOUNDS  
(Clean Properties, Inc.)  
  
515 Somerville, Avenue  
Somerville, MA  
Project No. 6735

EXPLORATION NO.	SAMPLE NO.	DEPTH FT.	SAMPLE TYPE	PID READING (ppm)
GP-1		0-4'		24
		4-8'		47
		8-12'		38
		12-16'		22
		16-20'		41
GP-2		0-4'		27
		4-8'		42
		8-12'		56
		12-16'		43
GP-4		0-4'		64
		4-8'		83
		8-12'		92
		12-16'		68
		16-20'		78
GP-5		0-4'		50
		4-8'		70
		8-12'		61
		12-16'		75
		16-20'		60
RIZ-1		0-2'		0.4
		5-7'		0.4
		10-12'		0.4
		15-17'		0.0
RIZ-2		0-2'		0.0
		5-7'		0.0
		10-12'		0.0
		15-17'		0.0
CP-1		6'		0.0
		9'		0.0
CP-2		5.5'		0.1
		11'		0.0
CP-3		5.5'		2.0
		11'		0.0
CP-4		5'		0.0
		10'		0.0
CP-5		5'		0.0
		11'		0.0
CP-7		2'		0.0
		5'		0.0
CP-8		3'		0.0
		5'		0.0
CP-9		3'		0.4
		5'		0.0
CP-10		3'		0.2
		6'		0.0
CP-11		3.5'		0.0
		6.5'		0.0
		7.5'		0.6
CP-12		3'		0.0
		7'		0.2
CP-13		3'		0.0
		7'		0.1
		9'		0.0
CP-14		9'		0.0
CP-15		3'		0.0
		6.5'		0.0
		10'		0.0

TABLE 2  
LABORATORY ANALYTICAL RESULTS - SOIL (McPhail Associates, LLC)

RTN 3-36184  
515 Somerville Avenue; Somerville, Massachusetts  
Project No. 6735

GRID CELL NO.			2		3		5		6		7		
LOCATION	RCS-1 Reportable Concentrations	Method 1 S-1/GW-2 Standards	TP-4	TP-4, S-4	TP-5	TP-5, S-6	TP-6	TP-6, S-1	TP-6	TP-6, S-4	TP-7	TP-7, S-6	TP-8, S-6
SAMPLING DATE			2/18/2020	2/18/2020	2/19/2020	2/19/2020	2/18/2020	2/18/2020	2/19/2020	2/19/2020	2/18/2020	2/18/2020	2/18/2020
LAB SAMPLE ID			L2007468-04	L2007468-05	L2007468-06	L2007468-07	L2007474-01	L2007474-02	L2007468-08	L2007468-09	L2007468-11	L2007468-12	L2007468-20
ADDITIONAL LAB ID							L2007772-01						
SAMPLE TYPE			Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill
SAMPLE DEPTH (ft.)			6-12	6-8	6-12	10-12	0-6	0-2	6-12	6-8	6-12	10-12	10-12
General Chemistry													
Specific Conductance @ 25 C			ND(10)	-	19	-	210	-	ND(10)	-	12	-	-
Solids, Total			83.3	90.4	87.5	83.5	85.1	83.3	87.9	86.3	81.6	81.9	-
pH (H)			6.6	-	5.8	-	6.6	-	6.9	-	7.4	-	-
Cyanide, Reactive			ND(10)	-	ND(10)	-	ND(10)	-	ND(10)	-	ND(10)	-	-
Sulfide, Reactive			ND(10)	-	ND(10)	-	ND(10)	-	ND(10)	-	ND(10)	-	-
Ignitability			NI	-	NI	-	NI	-	NI	-	NI	-	-
MCP Total Metals (mg/kg)													
Arsenic, Total	20	20	1.56	-	0.987	-	6.18	-	ND(0.439)	-	1.85	-	-
Barium, Total	1000	1000	11.7	-	14.4	-	136	-	17	-	13.1	-	-
Cadmium, Total	70	70	ND(0.473)	-	ND(0.446)	-	1.37	-	ND(0.439)	-	ND(0.371)	-	-
Chromium, Total	100	100	9.96	-	9.11	-	11.9	-	7.78	-	9.67	-	-
Lead, Total	200	200	4.14	-	3.32	-	229	-	2.43	-	4.57	-	-
Mercury, Total	20	20	ND(0.089)	-	ND(0.085)	-	1.81	-	ND(0.083)	-	ND(0.09)	-	-
Selenium, Total	400	400	ND(2.36)	-	ND(2.23)	-	ND(2.2)	-	ND(2.19)	-	ND(1.86)	-	-
Silver, Total	100	100	ND(0.473)	-	ND(0.446)	-	ND(0.441)	-	ND(0.439)	-	ND(0.371)	-	-
TCLP Metals by EPA 1311 (mg/l)													
Lead, TCLP			-	-	-	-	ND(0.5)	-	-	-	-	-	-
MCP Polychlorinated Biphenyls													
Aroclor 1248	1	1	ND(0.0392)	-	ND(0.0366)	-	0.195	-	ND(0.0374)	-	ND(0.0403)	-	-
Aroclor 1254	1	1	ND(0.0392)	-	ND(0.0366)	-	0.183	-	ND(0.0374)	-	ND(0.0403)	-	-
Aroclor 1260	1	1	ND(0.0392)	-	ND(0.0366)	-	0.065	-	ND(0.0374)	-	ND(0.0403)	-	-
PCBs, Total	1	1	ND(0.0392)	-	ND(0.0366)	-	0.443	-	ND(0.0374)	-	ND(0.0403)	-	-
MCP PAHs (mg/kg)													
Acenaphthene	4	1000	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	1000	1000	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	4	20	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	7	7	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	2	2	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	7	7	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	70	70	-	-	-	-	-	-	-	-	-	-	-
Chrysene	70	70	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	1	600	-	-	-	-	-	-	-	-	-	-	-
Anthracene	1000	1000	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)perylene	1000	1000	-	-	-	-	-	-	-	-	-	-	-
Fluorene	1000	1000	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	10	500	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	7	7	-	-	-	-	-	-	-	-	-	-	-
Pyrene	1000	1000	-	-	-	-	-	-	-	-	-	-	-
SUM			-	-	-	-	-	-	-	-	-	-	-

ND - Not detected above the laboratory reporting limit in ()  
Bold - exceeds RCS-1 reporting threshold  
Tested compounds not shown do not exceed laboratory reporting limit

TABLE 2  
LABORATORY ANALYTICAL RESULTS - SOIL (McPhail Associates, LLC)

RTN 3-36184  
515 Somerville Avenue; Somerville, Massachusetts  
Project No. 6735

LOCATION	RCS-1 Reportable Concentrations	Method 1 S-1/GW-2 Standards	TP-4	TP-4, S-4	TP-5	TP-5, S-6	TP-6	TP-6, S-1	TP-6	TP-6, S-4	TP-7	TP-7, S-6	TP-8, S-6
SAMPLING DATE			2/18/2020	2/18/2020	2/19/2020	2/19/2020	2/18/2020	2/18/2020	2/19/2020	2/19/2020	2/18/2020	2/18/2020	2/18/2020
LAB SAMPLE ID			L2007468-04	L2007468-05	L2007468-06	L2007468-07	L2007474-01	L2007474-02	L2007468-08	L2007468-09	L2007468-11	L2007468-12	L2007468-20
ADDITIONAL LAB ID							L2007772-01						
SAMPLE TYPE			Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill
SAMPLE DEPTH (ft.)			6-12	6-8	6-12	10-12	0-6	0-2	6-12	6-8	6-12	10-12	10-12
MCP Semivolatile Organics (mg/kg)													
Acenaphthene	4	1000	ND(0.16)	-	ND(0.15)	-	ND(1.5)	-	ND(0.15)	-	ND(0.16)	-	-
Fluoranthene	1000	1000	ND(0.12)	-	ND(0.11)	-	29	-	ND(0.11)	-	ND(0.12)	-	-
Naphthalene	4	20	ND(0.19)	-	ND(0.19)	-	ND(1.9)	-	ND(0.19)	-	ND(0.2)	-	-
Bis(2-ethylhexyl)phthalate	90		ND(0.19)	-	ND(0.19)	-	ND(1.9)	-	ND(0.19)	-	0.74	-	-
Benzo(a)anthracene	7	7	ND(0.12)	-	ND(0.11)	-	15	-	ND(0.11)	-	ND(0.12)	-	-
Benzo(a)pyrene	2	2	ND(0.16)	-	ND(0.15)	-	16	-	ND(0.15)	-	ND(0.16)	-	-
Benzo(b)fluoranthene	7	7	ND(0.12)	-	ND(0.11)	-	20	-	ND(0.11)	-	ND(0.12)	-	-
Benzo(k)fluoranthene	70	70	ND(0.12)	-	ND(0.11)	-	5.4	-	ND(0.11)	-	ND(0.12)	-	-
Chrysene	70	70	ND(0.12)	-	ND(0.11)	-	14	-	ND(0.11)	-	ND(0.12)	-	-
Acenaphthylene	1	600	ND(0.16)	-	ND(0.15)	-	ND(1.5)	-	ND(0.15)	-	ND(0.16)	-	-
Anthracene	1000	1000	ND(0.12)	-	ND(0.11)	-	3.3	-	ND(0.11)	-	ND(0.12)	-	-
Benzo(ghi)perylene	1000	1000	ND(0.16)	-	ND(0.15)	-	9.6	-	ND(0.15)	-	ND(0.16)	-	-
Fluorene	1000	1000	ND(0.19)	-	ND(0.19)	-	ND(1.9)	-	ND(0.19)	-	ND(0.2)	-	-
Phenanthrene	10	500	ND(0.12)	-	ND(0.11)	-	13	-	ND(0.11)	-	0.13	-	-
Dibenzo(a,h)anthracene	0.7	0.7	ND(0.082)	-	ND(0.078)	-	2.1	-	ND(0.078)	-	ND(0.084)	-	-
Indeno(1,2,3-cd)pyrene	7	7	ND(0.16)	-	ND(0.15)	-	9.6	-	ND(0.15)	-	ND(0.16)	-	-
Pyrene	1000	1000	ND(0.12)	-	ND(0.11)	-	25	-	ND(0.11)	-	ND(0.12)	-	-
Dibenzofuran	100		ND(0.19)	-	ND(0.19)	-	ND(1.9)	-	ND(0.19)	-	ND(0.2)	-	-
2-Methylnaphthalene	0.7	70	ND(0.082)	-	ND(0.078)	-	ND(0.8)	-	ND(0.078)	-	0.49	-	-
SUM			ND	-	ND	-	162	-	ND	-	1.36	-	-
MCP Volatile Organics by EPA 5035 (mg/kg)													
Toluene	30	500	-	ND(0.00095)	-	ND(0.00093)	-	ND(0.001)	-	ND(0.0011)	-	ND(0.77)	-
n-Butylbenzene			-	ND(0.00095)	-	ND(0.00093)	-	ND(0.001)	-	ND(0.0011)	-	40	-
sec-Butylbenzene			-	ND(0.00095)	-	ND(0.00093)	-	ND(0.001)	-	ND(0.0011)	-	41	-
tert-Butylbenzene	100		-	ND(0.0019)	-	ND(0.0019)	-	ND(0.0021)	-	ND(0.0022)	-	4.7	-
Isopropylbenzene	1000		-	ND(0.00095)	-	ND(0.00093)	-	ND(0.001)	-	ND(0.0011)	-	15	-
n-Propylbenzene	100		-	ND(0.00095)	-	ND(0.00093)	-	ND(0.001)	-	ND(0.0011)	-	45	-
Petroleum Hydrocarbon Quantitation (mg/kg)													
TPH (C10-C36)	1000	1000	ND(39.2)	-	ND(36.6)		518	-	ND(37.4)	-	1100	-	-
Volatile Petroleum Hydrocarbons (mg/kg)													
C9-C10 Aromatics	100	100	-	-	-	-	-	-	-	-	-	-	ND(9.76)
C5-C8 Aliphatics, Adjusted	100	100	-	-	-	-	-	-	-	-	-	-	ND(9.76)
C9-C12 Aliphatics, Adjusted	1000	1000	-	-	-	-	-	-	-	-	-	-	ND(9.76)
Benzene	2	40	-	-	-	-	-	-	-	-	-	-	ND(0.195)
Toluene	30	500	-	-	-	-	-	-	-	-	-	-	ND(0.195)
Ethylbenzene	40	500	-	-	-	-	-	-	-	-	-	-	ND(0.195)
p/m-Xylene	100	100	-	-	-	-	-	-	-	-	-	-	ND(0.195)
o-Xylene	100	100	-	-	-	-	-	-	-	-	-	-	ND(0.195)
Methyl tert butyl ether	0.1	100	-	-	-	-	-	-	-	-	-	-	ND(0.098)
Naphthalene	4	20	-	-	-	-	-	-	-	-	-	-	ND(0.39)

ND - Not detected above the laboratory reporting limit in ()  
Bold - exceeds RCS-1 reporting threshold  
Tested compounds not shown do not exceed laboratory reporting limit



TABLE 2  
LABORATORY ANALYTICAL RESULTS - SOIL (McPhail Associates, LLC)

RTN 3-36184  
515 Somerville Avenue; Somerville, Massachusetts  
Project No. 6735

GRID CELL NO.		10						11		12			
LOCATION	RCS-1 Reportable Concentrations	TP-9	TP-9 3-6'	TP-9 6-9'	TP-9, S-3	TP-9A	TP-9A	TP-10	TP-10, S-6	TP-11	TP-11, S-2	TP-11	TP-11, S-4
SAMPLING DATE		2/19/2020	2/19/2020	2/19/2020	2/19/2020	2/19/2020	2/19/2020	2/18/2020	2/18/2020	2/19/2020	2/19/2020	2/19/2020	2/19/2020
LAB SAMPLE ID		L2007474-03	L2007468-10	L2007468-13	L2007468-19	L2007474-04	L2007468-14	L2007468-15	L2007468-16	L2007474-06	L2007474-07	L2007468-17	L2007468-18
ADDITIONAL LAB ID													
SAMPLE TYPE		Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill
SAMPLE DEPTH (ft.)		0-3	3-6	6-9	10-12	0-3	6-9	6-12	10-12	0-6	2-4	6-12	6-8
General Chemistry													
Specific Conductance @ 25 C		-	-	-	-	-	-	24	-	22	-	14	-
Solids, Total		88.3	88.6	90.7	82.2	83.6	91	79	83.7	87.9	82.4	86.8	94.3
pH (H)		-	-	-	-	-	-	7.7	-	7.8	-	7.6	-
Cyanide, Reactive		-	-	-	-	-	-	ND(10)	-	ND(10)	-	ND(10)	-
Sulfide, Reactive		-	-	-	-	-	-	ND(10)	-	ND(10)	-	ND(10)	-
Ignitability		-	-	-	-	-	-	NI	-	NI	-	NI	-
MCP Total Metals (mg/kg)													
Arsenic, Total	20	-	-	-	-	-	-	3.45	-	6.65	-	3.74	-
Barium, Total	1000	-	-	-	-	-	-	12.9	-	16.9	-	12.8	-
Cadmium, Total	70	-	-	-	-	-	-	ND(0.424)	-	ND(0.446)	-	ND(0.37)	-
Chromium, Total	100	-	-	-	-	-	-	10.1	-	10.6	-	10.1	-
Lead, Total	200	-	-	-	-	-	-	8.65	-	33.2	-	5.11	-
Mercury, Total	20	-	-	-	-	-	-	ND(0.093)	-	ND(0.083)	-	ND(0.084)	-
Selenium, Total	400	-	-	-	-	-	-	ND(2.12)	-	ND(2.23)	-	ND(1.85)	-
Silver, Total	100	-	-	-	-	-	-	ND(0.424)	-	ND(0.446)	-	ND(0.37)	-
TCLP Metals by EPA 1311 (mg/l)													
Lead, TCLP		-	-	-	-	-	-	-	-	-	-	-	-
MCP Polychlorinated Biphenyls													
Aroclor 1248	1	ND(0.0373)	-	ND(0.0356)	-	0.0796	ND(0.0357)	ND(0.0408)	-	ND(0.037)	-	ND(0.0372)	-
Aroclor 1254	1	ND(0.0373)	-	ND(0.0356)	-	0.128	ND(0.0357)	ND(0.0408)	-	ND(0.037)	-	ND(0.0372)	-
Aroclor 1260	1	ND(0.0373)	-	ND(0.0356)	-	0.128	ND(0.0357)	ND(0.0408)	-	ND(0.037)	-	ND(0.0372)	-
PCBs, Total	1	ND(0.0373)	-	ND(0.0356)	-	0.336	ND(0.0357)	ND(0.0408)	-	ND(0.037)	-	ND(0.0372)	-
MCP PAHs (mg/kg)													
Acenaphthene	4	0.54	0.25	-	-	-	-	-	-	-	-	-	-
Fluoranthene	1000	7.8	4.2	-	-	-	-	-	-	-	-	-	-
Naphthalene	4	ND(0.37)	ND(0.18)	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	7	3.6	2	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	2	3.6	2	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	7	4.3	2.4	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	70	1.4	0.74	-	-	-	-	-	-	-	-	-	-
Chrysene	70	3.3	1.9	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	1	ND(0.3)	0.2	-	-	-	-	-	-	-	-	-	-
Anthracene	1000	1.4	0.58	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)perylene	1000	1.9	1.2	-	-	-	-	-	-	-	-	-	-
Fluorene	1000	0.42	0.2	-	-	-	-	-	-	-	-	-	-
Phenanthrene	10	6.1	2.6	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	0.7	0.48	0.3	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	7	2.2	1.2	-	-	-	-	-	-	-	-	-	-
Pyrene	1000	6.6	3.6	-	-	-	-	-	-	-	-	-	-
SUM		43.64	23.37	-	-	-	-	-	-	-	-	-	-

ND - Not detected above the laboratory reporting limit in ()  
Bold - exceeds RCS-1 reporting threshold  
Tested compounds not shown do not exceed  
laboratory reporting limit

TABLE 2  
LABORATORY ANALYTICAL RESULTS - SOIL (McPhail Associates, LLC)

RTN 3-36184  
515 Somerville Avenue; Somerville, Massachusetts  
Project No. 6735

LOCATION	RCS-1 Reportable Concentrations	TP-9	TP-9 3-6'	TP-9 6-9'	TP-9, S-3	TP-9A	TP-9A	TP-10	TP-10, S-6	TP-11	TP-11, S-2	TP-11	TP-11, S-4
SAMPLING DATE		2/19/2020	2/19/2020	2/19/2020	2/19/2020	2/19/2020	2/19/2020	2/18/2020	2/18/2020	2/19/2020	2/19/2020	2/19/2020	2/19/2020
LAB SAMPLE ID		L2007474-03	L2007468-10	L2007468-13	L2007468-19	L2007474-04	L2007468-14	L2007468-15	L2007468-16	L2007474-06	L2007474-07	L2007468-17	L2007468-18
ADDITIONAL LAB ID													
SAMPLE TYPE		Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill
SAMPLE DEPTH (ft.)		0-3	3-6	6-9	10-12	0-3	6-9	6-12	10-12	0-6	2-4	6-12	6-8
MCP Semivolatile Organics (mg/kg)													
Acenaphthene	4	-	-	-	-	-	-	ND(0.17)	-	ND(0.15)	-	ND(0.15)	-
Fluoranthene	1000	-	-	-	-	-	-	ND(0.12)	-	0.46	-	ND(0.11)	-
Naphthalene	4	-	-	-	-	-	-	ND(0.21)	-	ND(0.18)	-	ND(0.19)	-
Bis(2-ethylhexyl)phthalate	90	-	-	-	-	-	-	ND(0.21)	-	ND(0.18)	-	ND(0.19)	-
Benzo(a)anthracene	7	-	-	-	-	-	-	ND(0.12)	-	0.21	-	ND(0.11)	-
Benzo(a)pyrene	2	-	-	-	-	-	-	ND(0.17)	-	0.2	-	ND(0.15)	-
Benzo(b)fluoranthene	7	-	-	-	-	-	-	ND(0.12)	-	0.25	-	ND(0.11)	-
Benzo(k)fluoranthene	70	-	-	-	-	-	-	ND(0.12)	-	ND(0.11)	-	ND(0.11)	-
Chrysene	70	-	-	-	-	-	-	ND(0.12)	-	0.23	-	ND(0.11)	-
Acenaphthylene	1	-	-	-	-	-	-	ND(0.17)	-	ND(0.15)	-	ND(0.15)	-
Anthracene	1000	-	-	-	-	-	-	ND(0.12)	-	ND(0.11)	-	ND(0.11)	-
Benzo(ghi)perylene	1000	-	-	-	-	-	-	ND(0.17)	-	ND(0.15)	-	ND(0.15)	-
Fluorene	1000	-	-	-	-	-	-	ND(0.21)	-	ND(0.18)	-	ND(0.19)	-
Phenanthrene	10	-	-	-	-	-	-	ND(0.12)	-	0.35	-	ND(0.11)	-
Dibenzo(a,h)anthracene	0.7	-	-	-	-	-	-	ND(0.088)	-	ND(0.077)	-	ND(0.08)	-
Indeno(1,2,3-cd)pyrene	7	-	-	-	-	-	-	ND(0.17)	-	ND(0.15)	-	ND(0.15)	-
Pyrene	1000	-	-	-	-	-	-	ND(0.12)	-	0.39	-	ND(0.11)	-
Dibenzofuran	100	-	-	-	-	-	-	ND(0.21)	-	ND(0.18)	-	ND(0.19)	-
2-Methylnaphthalene	0.7	-	-	-	-	-	-	ND(0.088)	-	ND(0.077)	-	ND(0.08)	-
SUM		-	-	-	-	-	-	ND	-	2.09	-	ND	-
MCP Volatile Organics by EPA 5035 (mg/kg)													
Toluene	30	-	-	-	-	-	-	-	ND(0.071)	-	ND(0.0012)	-	ND(0.00089)
n-Butylbenzene		-	-	-	-	-	-	-	0.14	-	ND(0.0012)	-	ND(0.00089)
sec-Butylbenzene		-	-	-	-	-	-	-	0.12	-	ND(0.0012)	-	ND(0.00089)
tert-Butylbenzene	100	-	-	-	-	-	-	-	ND(0.14)	-	ND(0.0024)	-	ND(0.0018)
Isopropylbenzene	1000	-	-	-	-	-	-	-	ND(0.071)	-	ND(0.0012)	-	ND(0.00089)
n-Propylbenzene	100	-	-	-	-	-	-	-	ND(0.071)	-	ND(0.0012)	-	ND(0.00089)
Petroleum Hydrocarbon Quantitation (mg/kg)													
TPH (C10-C36)	1000	-	-	-	-	-	-	ND(40.3)	-	ND(36.8)	-	ND(37.4)	-
Volatile Petroleum Hydrocarbons (mg/kg)													
C9-C10 Aromatics	100	-	-	-	ND(6.12)	-	-	-	-	-	-	-	-
C5-C8 Aliphatics, Adjusted	100	-	-	-	ND(6.12)	-	-	-	-	-	-	-	-
C9-C12 Aliphatics, Adjusted	1000	-	-	-	ND(6.12)	-	-	-	-	-	-	-	-
Benzene	2	-	-	-	ND(0.122)	-	-	-	-	-	-	-	-
Toluene	30	-	-	-	ND(0.122)	-	-	-	-	-	-	-	-
Ethylbenzene	40	-	-	-	ND(0.122)	-	-	-	-	-	-	-	-
p/m-Xylene	100	-	-	-	ND(0.122)	-	-	-	-	-	-	-	-
o-Xylene	100	-	-	-	ND(0.122)	-	-	-	-	-	-	-	-
Methyl tert butyl ether	0.1	-	-	-	ND(0.061)	-	-	-	-	-	-	-	-
Naphthalene	4	-	-	-	ND(0.245)	-	-	-	-	-	-	-	-

ND - Not detected above the laboratory reporting limit in ()  
Bold - exceeds RCS-1 reporting threshold  
Tested compounds not shown do not exceed laboratory reporting limit

TABLE 2  
LABORATORY ANALYTICAL RESULTS - SOIL (McPhail Associates, LLC)

RTN 3-36184  
515 Somerville Avenue; Somerville, Massachusetts  
Project No. 6735

GRID CELL NO.		15										Maximum Concentration	Minimum Concentration	Average Concentration
LOCATION	RCS-1 Reportable Concentrations	TP-14 0-3'	TP-14 0-6'	TP-14 0-6'	TP-14, S-4	TP-15	TP-15, S-4	TP-16	TP-16	TP-16, S-2	TP-16, S-5			
SAMPLING DATE		2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/27/2020			
LAB SAMPLE ID		L2007474-14	L2007474-08	L2007474-08 R1	L2007474-09	L2007474-10	L2007474-11	L2007474-05	L2007474-12	L2007474-13	L2008807-01			
ADDITIONAL LAB ID			L2007772-02			L2007772-03			L2007772-04					
SAMPLE TYPE		Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill			
SAMPLE DEPTH (ft.)		0-3	0-6	0-6	5-6	0-6	5-6	3-4	0-6	1-2	4-5			
General Chemistry														
Specific Conductance @ 25 C		-	260	-	-	74	-	150	-	-				
Solids, Total		-	88.4	-	85.1	85.4	87.8	84.4	84.7	-				
pH (H)		-	7.5	-	-	8	-	8.6	-	-				
Cyanide, Reactive		-	ND(10)	-	-	ND(10)	-	ND(10)	-	-				
Sulfide, Reactive		-	ND(10)	-	-	ND(10)	-	ND(10)	-	-				
Ignitability		-	NI	-	-	NI	-	NI	-	-				
MCP Total Metals (mg/kg)														
Arsenic, Total	20	-	5.52	-	-	6.26	-	-	5.3	-				
Barium, Total	1000	-	43.3	-	-	219	-	-	93.8	-				
Cadmium, Total	70	-	ND(0.437)	-	-	0.935	-	-	0.664	-				
Chromium, Total	100	-	11.8	-	-	14.5	-	-	11.5	-				
Lead, Total	200	-	173	-	-	632	-	-	871	-	871	2.43	178.77	
Mercury, Total	20	-	0.512	-	-	0.565	-	-	0.622	-				
Selenium, Total	400	-	ND(2.18)	-	-	ND(2.27)	-	-	ND(2.26)	-				
Silver, Total	100	-	ND(0.437)	-	-	ND(0.454)	-	-	ND(0.452)	-				
TCLP Metals by EPA 1311 (mg/l)														
Lead, TCLP		ND(0.5)	ND(0.5)	-	-	0.583	-	16	4.02	-	12.8	16	0.5	4.99
MCP Polychlorinated Biphenyls														
Aroclor 1248	1	-	ND(0.0364)	-	-	ND(0.0366)	-	-	ND(0.0383)	-		0.195	ND	0.05
Aroclor 1254	1	-	ND(0.0364)	-	-	ND(0.0366)	-	-	0.061	-		0.183	ND	0.05
Aroclor 1260	1	-	ND(0.0364)	-	-	ND(0.0366)	-	-	ND(0.0383)	-		0.128	ND	0.05
PCBs, Total	1	-	ND(0.0364)	-	-	ND(0.0366)	-	-	0.061	-		0.443	ND	0.09
MCP PAHs (mg/kg)														
Acenaphthene	4	-	-	-	-	-	-	-	-	-		0.54	0.25	0.40
Fluoranthene	1000	-	-	-	-	-	-	-	-	-		7.8	4.2	6.00
Naphthalene	4	-	-	-	-	-	-	-	-	-		0.37	0.18	0.28
Benzo(a)anthracene	7	-	-	-	-	-	-	-	-	-		3.6	2	2.80
Benzo(a)pyrene	2	-	-	-	-	-	-	-	-	-		3.6	2	2.80
Benzo(b)fluoranthene	7	-	-	-	-	-	-	-	-	-		4.3	2.4	3.35
Benzo(k)fluoranthene	70	-	-	-	-	-	-	-	-	-		1.4	0.74	1.07
Chrysene	70	-	-	-	-	-	-	-	-	-		3.3	1.9	2.60
Acenaphthylene	1	-	-	-	-	-	-	-	-	-		0.3	0.2	0.25
Anthracene	1000	-	-	-	-	-	-	-	-	-		1.4	0.58	0.99
Benzo(ghi)perylene	1000	-	-	-	-	-	-	-	-	-		1.9	1.2	1.55
Fluorene	1000	-	-	-	-	-	-	-	-	-		0.42	0.2	0.31
Phenanthrene	10	-	-	-	-	-	-	-	-	-		6.1	2.6	4.35
Dibenzo(a,h)anthracene	0.7	-	-	-	-	-	-	-	-	-		0.48	0.3	0.39
Indeno(1,2,3-cd)pyrene	7	-	-	-	-	-	-	-	-	-		2.2	1.2	1.70
Pyrene	1000	-	-	-	-	-	-	-	-	-		6.6	3.6	5.10
SUM		-	-	-	-	-	-	-	-	-		43.64	23.37	33.51

ND - Not detected above the laboratory reporting limit in ()  
Bold - exceeds RCS-1 reporting threshold  
Tested compounds not shown do not exceed laboratory reporting limit

TABLE 2  
LABORATORY ANALYTICAL RESULTS - SOIL (McPhail Associates, LLC)

RTN 3-36184  
515 Somerville Avenue; Somerville, Massachusetts  
Project No. 6735

LOCATION	RCS-1 Reportable Concentrations	TP-14 0-3'	TP-14 0-6'	TP-14 0-6'	TP-14, S-4	TP-15	TP-15, S-4	TP-16	TP-16	TP-16, S-2	TP-16, S-5	Maximum Concentration	Minimum Concentration	Average Concentration
SAMPLING DATE		2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/18/2020	2/27/2020			
LAB SAMPLE ID		L2007474-14	L2007474-08	L2007474-08 R1	L2007474-09	L2007474-10	L2007474-11	L2007474-05	L2007474-12	L2007474-13	L2008807-01			
ADDITIONAL LAB ID			L2007772-02			L2007772-03			L2007772-04					
SAMPLE TYPE		Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill			
SAMPLE DEPTH (ft.)		0-3	0-6	0-6	5-6	0-6	5-6	3-4	0-6	1-2	4-5			
MCP Semivolatile Organics (mg/kg)														
Acenaphthene	4	-	1.2	-	-	11	-	-	6.3	-		11	ND	1.92
Fluoranthene	1000	-	11	11	-	83	-	-	55	-		83	ND	15.85
Naphthalene	4	-	0.57	-	-	ND(3.8)	-	-	2.5	-		3.8	ND	0.92
Bis(2-ethylhexyl)phthalate	90	-	ND(0.18)	-	-	ND(3.8)	-	-	ND(2)	-		3.8	ND	0.89
Benzo(a)anthracene	7	-	5.3	-	-	36	-	-	27	-		36	ND	7.65
Benzo(a)pyrene	2	-	5.1	-	-	34	-	-	27	-		34	ND	7.57
Benzo(b)fluoranthene	7	-	6.1	-	-	42	-	-	33	-		42	ND	9.28
Benzo(k)fluoranthene	70	-	1.6	-	-	9.9	-	-	9.8	-		9.9	ND	2.50
Chrysene	70	-	4.8	-	-	37	-	-	25	-		37	ND	7.43
Acenaphthylene	1	-	0.43	-	-	ND(3)	-	-	ND(1.6)	-		3	ND	0.69
Anthracene	1000	-	2.7	-	-	18	-	-	11	-		18	ND	3.25
Benzo(ghi)perylene	1000	-	2.5	-	-	17	-	-	14	-		17	ND	4.02
Fluorene	1000	-	1.1	-	-	8.8	-	-	5.6	-		8.8	ND	1.70
Phenanthrene	10	-	9.6	9.1	-	87	-	-	44	-		87	ND	13.65
Dibenzo(a,h)anthracene	0.7	-	0.66	-	-	4.8	-	-	3.9	-		4.8	ND	1.09
Indeno(1,2,3-cd)pyrene	7	-	2.7	-	-	18	-	-	15	-		18	ND	4.22
Pyrene	1000	-	9.4	9.1	-	78	-	-	46	-		78	ND	14.05
Dibenzofuran	100	-	0.72	-	-	4.8	-	-	2.9	-		4.8	ND	1.06
2-Methylnaphthalene	0.7	-	0.31	-	-	2.4	-	-	1.2	-		2.4	ND	0.52
SUM		-	65.79	29.2	-	491.7	-	-	329.2	-		491.7	ND	154.48
MCP Volatile Organics by EPA 5035 (mg/kg)														
Toluene	30	-	-	-	ND(0.0012)	-	ND(0.0012)	-	-	0.001		0.77	ND	0.08
n-Butylbenzene		-	-	-	ND(0.0012)	-	ND(0.0012)	-	-	ND(0.00064)		40	ND	3.65
sec-Butylbenzene		-	-	-	ND(0.0012)	-	ND(0.0012)	-	-	ND(0.00064)		41	ND	3.74
tert-Butylbenzene	100	-	-	-	ND(0.0025)	-	ND(0.0023)	-	-	ND(0.0013)		4.7	ND	0.44
Isopropylbenzene	1000	-	-	-	ND(0.0012)	-	ND(0.0012)	-	-	ND(0.00064)		15	ND	1.37
n-Propylbenzene	100	-	-	-	ND(0.0012)	-	ND(0.0012)	-	-	ND(0.00064)		45	ND	4.10
Petroleum Hydrocarbon Quantitation (mg/kg)														
TPH (C10-C36)	1000	-	186	-	-	1020	-	-	1260	-		1260	36.6	391.97
Volatile Petroleum Hydrocarbons (mg/kg)														
C9-C10 Aromatics	100	-	-	-	-	-	-	-	-	-				
C5-C8 Aliphatics, Adjusted	100	-	-	-	-	-	-	-	-	-				
C9-C12 Aliphatics, Adjusted	1000	-	-	-	-	-	-	-	-	-				
Benzene	2	-	-	-	-	-	-	-	-	-				
Toluene	30	-	-	-	-	-	-	-	-	-				
Ethylbenzene	40	-	-	-	-	-	-	-	-	-				
p/m-Xylene	100	-	-	-	-	-	-	-	-	-				
o-Xylene	100	-	-	-	-	-	-	-	-	-				
Methyl tert butyl ether	0.1	-	-	-	-	-	-	-	-	-				
Naphthalene	4	-	-	-	-	-	-	-	-	-				

ND - Not detected above the laboratory reporting limit in ()  
Bold - exceeds RCS-1 reporting threshold  
Tested compounds not shown do not exceed  
laboratory reporting limit

TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID				CELL 4								CELL 5			
Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102  Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA															
				CE68609		CE87845		CE88398		CE87846		CE88399		CE88395	
				11/22/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019	
				CP-19 0-3 FT		LOC 3 0-6		LOCATION 3 0-6 FT		LOC 3 6-12		LOCATION 3 6-12 FT		LOCATION 1 12-13 FT	
				Soil		Soil		Soil		Soil		Soil		Soil	
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
Miscellaneous/Inorganics															
Percent Solid (%)	PHNX - PCTSOLID		NA	92		82				73				78	
Conductivity - Soil Matrix (um/hos/cm)	PHNX - COND		NA	247	5	46	5			69	5			6,450	500
Corrosivity (Pos/Neg)	PHNX - CORROSIVITY		NA	Negative		Negative				Negative				Negative	
Flash Point (Degree F)	PHNX - FLASH POINT		NA	>200	200	>200	200			>200	200			>200	200
Ignitability (Degree F)	PHNX - IGNITABILITY			Passed	140	Passed	140			Passed	140			Passed	140
pH at 25C - Soil	PHNX - PH			6.63	1.00	7.16	1.00			7.23	1.00			6.88	1.00
Reactivity Cyanide (mg/kg)	PHNX - REACT CYANIDE			< 5	5	< 6	6			< 7	7			< 6	6
Reactivity Sulfide (mg/kg)	PHNX - REACT SULFIDE			< 20	20	< 20	20			< 20	20			< 20	20
Reactivity (Pos/Neg)	PHNX - REACTIVITY			Negative		Negative				Negative				Negative	
Metals, Total (mg/kg)	total														
Antimony	7440-36-0	20	20	< 3.2	3.2	< 3.9	3.9			< 4.4	4.4			< 4.1	4.1
Arsenic	7440-38-2	20	20	4.04	0.65	1.26	0.77			1.38	0.89			0.85	0.82
Barium	7440-39-3	1000	1,000	55.1	0.32	34.2	0.39			16.8	0.44			9.57	0.41
Beryllium	7440-41-7	90	90	0.49	0.26	< 0.31	0.31			< 0.36	0.36			< 0.33	0.33
Cadmium	7440-43-9	70	70	1.14	0.32	< 0.39	0.39			< 0.44	0.44			< 0.41	0.41
Chromium	7440-47-3	100	100	15.6	0.32	12	0.39			11	0.44			7.86	0.41
Lead	7439-92-1	200	200	135	0.32	9.33	0.39			6.87	0.44			4.53	0.41
Mercury	7439-97-6	20	20	0.33	0.03	< 0.03	0.03			< 0.03	0.03			< 0.03	0.03
Nickel	7440-02-0	600	600	11.7	0.32	8.13	0.39			7.31	0.44			7.26	0.41
Selenium	7782-49-2	400	400	< 1.3	1.3	< 1.5	1.5			< 1.8	1.8			< 1.6	1.6
Silver	7440-22-4	100	100	< 0.32	0.32	< 0.39	0.39			< 0.44	0.44			< 0.41	0.41
Thallium	7440-28-0	8	8	< 2.9	2.9	< 3.5	3.5			< 4.0	4.0			< 3.7	3.7
Vanadium	7440-62-2	400	400	23.6	0.32	16.5	0.39			16.6	0.44			12.8	0.41
Zinc	7440-66-6	1000	1,000	114	0.6	25.9	0.8			18.6	0.9			16.4	0.8
Metals, TCLP (mg/l)	total														
TCLP Lead	7439-92-1			0.1	0.10										
TCLP Barium	7440-39-3														
TCLP Chromium	7440-47-3														
TPH By SW8015D DRO (mg/kg)	total	1000	1000												
Fuel Oil #2 / Diesel Fuel	68476-30-2			< 53	53	< 59	59			< 68	68			< 63	63
Fuel Oil #4	68476-31-3			< 53	53	< 59	59			< 68	68			< 63	63
Fuel Oil #6	68553-00-4			< 53	53	< 59	59			< 68	68			< 63	63
Kerosene	8008-20-6			< 53	53	< 59	59			< 68	68			< 63	63
Motor Oil	PHNX - MOTOR OIL			< 53	53	< 59	59			< 68	68			< 63	63
Other Oil	PHNX - OTHER OIL			**	53	< 59	59			< 68	68			< 63	63
Unidentified	PHNX - TPH			60	53	< 59	59			< 68	68			< 63	63
TPH By MA VPH 5/2004 (mg/kg)	total														
Benzene	71-43-2		2					< 0.032	0.032			< 0.029	0.029	< 0.055	0.055
C5-C8 Aliphatic Hydrocarbons *1,2	PHNX - C5-C8		100					< 6.3	6.3			< 5.8	5.8	< 11	11
C9-C10 Aromatic Hydrocarbons *1	PHNX - C9-C10							< 6.3	6.3			< 5.8	5.8	< 11	11
C9-C12 Aliphatic Hydrocarbons *1,3	PHNX - C9-C12		1000					< 6.3	6.3			< 5.8	5.8	< 11	11
Ethyl Benzene	100-41-4		40					< 0.063	0.063			< 0.058	0.058	< 0.11	0.11
m,p-Xylenes	179601-23-1		100					< 0.063	0.063			< 0.058	0.058	< 0.11	0.11
MTBE	1634-04-4		0.1					< 0.063	0.063			< 0.058	0.058	< 0.1	0.1
Naphthalene	91-20-3		4					< 0.32	0.32			< 0.29	0.29	< 0.55	0.55
o-Xylene	95-47-6		100					< 0.063	0.063			< 0.058	0.058	< 0.11	0.11
Toluene	108-88-3		30					< 0.063	0.063			< 0.058	0.058	< 0.11	0.11
Unadjusted C5-C8 Aliphatics (*1)	PHNX - UNC5-C8		100					< 6.3	6.3			< 5.8	5.8	< 11	11
Unadjusted C9-C12 Aliphatics (*1)	PHNX - UNC9-C12		1000					< 6.3	6.3			< 5.8	5.8	< 11	11
PCBs By SW8082A (ug/kg)	total	1													
PCB-1242	53469-21-9	1	1,000	< 72	72	< 81	81			< 90	90			< 85	85
PCB-1248	12672-29-6	1	1,000	< 72	72	< 81	81			< 90	90			< 85	85
PCB-1254	11097-69-1	1	1,000	< 72	72	< 81	81			< 90	90			< 85	85

TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID				CELL 4								CELL 5			
Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102				CE68609		CE87845		CE88398		CE87846		CE88399		CE88395	
				11/22/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019	
				CP-19 0-3 FT		LOC 3 0-6		LOCATION 3 0-6 FT		LOC 3 6-12		LOCATION 3 6-12 FT		LOCATION 1 12-13 FT	
				Soil		Soil		Soil		Soil		Soil		Soil	
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA				CAS											
Volatiles By SW8260C (ug/kg)		total			0	0	0	0	0	0	0	0	0	0	0
1,2,4-Trimethylbenzene		95-63-6	1,000,000					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
2-Isopropyltoluene		527-84-4	0					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
n-Butylbenzene		104-51-8	NE					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
n-Propylbenzene		103-65-1	100,000					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
o-Xylene		95-47-6	100,000					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
p-Isopropyltoluene		99-87-6	NE					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
sec-Butylbenzene		135-98-8	NA					< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
Semivolatiles By SW8270D (ug/kg)		total			30,450	0	0	0	0	0	0	0	0	0	0
2-Methylnaphthalene		91-57-6	80	700	< 250	250	< 280	280		< 320	320		< 290	290	
Acenaphthene		83-32-9	1000	4,000	< 250	250	< 280	280		< 320	320		< 290	290	
Acenaphthylene		208-96-8	600	1,000	< 250	250	< 280	280		< 320	320		< 290	290	
Anthracene		120-12-7	1000	1,000,000	810	250	< 280	280		< 320	320		< 290	290	
Benz(a)anthracene		56-55-3	7	7,000	2,900	250	< 280	280		< 320	320		< 290	290	
Benzidine		92-87-5		10,000	< 250	250	< 280	280		< 320	320		< 290	290	
Benzo(a)pyrene		50-32-8	2	2,000	2,800	250	< 280	280		< 320	320		< 290	290	
Benzo(b)fluoranthene		205-99-2	7	7,000	2,500	250	< 280	280		< 320	320		< 290	290	
Benzo(ghi)perylene		191-24-2	1000	1,000,000	1,700	250	< 280	280		< 320	320		< 290	290	
Benzo(k)fluoranthene		207-08-9	70	70,000	2,100	250	< 280	280		< 320	320		< 290	290	
Bis(2-ethylhexyl)phthalate		117-81-7	90	90,000	< 250	250	< 280	280		< 320	320		< 290	290	
Carbazole		86-74-8			< 350	350	< 400	400		< 450	450		< 420	420	
Chrysene		218-01-9	70	70,000	2,800	250	< 280	280		< 320	320		< 290	290	
Dibenz(a,h)anthracene		53-70-3	0.7	700	440	250	< 280	280		< 320	320		< 290	290	
Dibenzofuran		132-64-9		100,000	< 250	250	< 280	280		< 320	320		< 290	290	
Fluoranthene		206-44-0	1000	1,000,000	5,300	250	< 280	280		< 320	320		< 290	290	
Fluorene		86-73-7	1000	1,000,000	< 250	250	< 280	280		< 320	320		< 290	290	
Indeno(1,2,3-cd)pyrene		193-39-5	7	7,000	1,900	250	< 280	280		< 320	320		< 290	290	
Isophorone		78-59-1		100,000	< 250	250	< 280	280		< 320	320		< 290	290	
Naphthalene		91-20-3	20	4,000	< 250	250	< 280	280		< 320	320		< 290	290	
Pentachlorophenol		87-86-5	3	3,000	< 350	350	< 400	400		< 450	450		< 420	420	
Phenanthrene		85-01-8	500	10,000	2,800	250	< 280	280		< 320	320		< 290	290	
Phenol		108-95-2	50	1,000	< 250	250	< 280	280		< 320	320		< 290	290	
Pyrene		129-00-0	1000	1,000,000	4,400	250	< 280	280		< 320	320		< 290	290	
Pyridine		110-86-1		500,000	< 350	350	< 400	400		< 450	450		< 420	420	
Oxygenates & Dioxane By SW8260C (OXY) (ug/kg)															
1,4-Dioxane		123-91-1	6	200				< 95	95			< 76	76	< 150	150
Diethyl ether		60-29-7		100,000				< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
Di-isopropyl ether		108-20-3		100,000				< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
Ethyl tert-butyl ether		637-92-3		NE				< 4.8	4.8			< 3.8	3.8	< 7.4	7.4
tert-amyl methyl ether		994-05-8		NE				< 4.8	4.8			< 3.8	3.8	< 7.4	7.4

**RTN 3-36184**  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Tested Compounds not shown do not exceed the laboratory reporting limits



TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID			CELL 6						CELL 7								CELL 8								
<div>Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102</div>			Lab Sample Id Collection Date Client Id Matrix	Method 1 S-1/GW-2	RCS-1																				
						CE68610		CE68611		CE87854		CE88411		CE87855		CE88412		CE87847		CE88400		CE87848		CE88401	
						11/22/2019		11/22/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019	
						CP-20 3.5-6.5 FT		CP-20 7.5-8 FT		LOC 10 0-6		LOC-10-0-6		LOC 10 6-12		LOC-10-6-12		LOC 8 0-6		LOCATION 8 0-6 FT		LOC 8 6-12		LOCATION 8 6-12 FT	
						Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA			CAS			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL		
Volatiles By SW8260C (ug/kg)		total		0	0	112900	367200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1,2,4-Trimethylbenzene		95-63-6		1,000,000	< 4.2	4.2	57,000	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
2-Isopropyltoluene		527-84-4		0	< 4.2	4.2	4,100	3,600			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
n-Butylbenzene		104-51-8		NE	< 4.2	4.2	16,000	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
n-Propylbenzene		103-65-1		100,000	< 4.2	4.2	8,800	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
o-Xylene		95-47-6		100,000	< 4.2	4.2	< 6100	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
p-Isopropyltoluene		99-87-6		NE	< 4.2	4.2	13,000	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
sec-Butylbenzene		135-98-8		NA	< 4.2	4.2	14,000	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
Semivolatiles By SW8270D (ug/kg)		total		0	0	1,860	0	0	0	0	0	0	0	0	0	4,120	0	0	0	0	0	0	0		
2-Methylnaphthalene		91-57-6	80	700	< 240	240	300	240	< 260	260			< 270	270			< 280	280			< 260	260			
Acenaphthene		83-32-9	1000	4,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Acenaphthylene		208-96-8	600	1,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Anthracene		120-12-7	1000	1,000,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Benz(a)anthracene		56-55-3	7	7,000	< 240	240	< 240	240	< 260	260			< 270	270			440	280			< 260	260			
Benzidine		92-87-5		10,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Benzo(a)pyrene		50-32-8	2	2,000	< 240	240	< 240	240	< 260	260			< 270	270			400	280			< 260	260			
Benzo(b)fluoranthene		205-99-2	7	7,000	< 240	240	< 240	240	< 260	260			< 270	270			320	280			< 260	260			
Benzo(ghi)perylene		191-24-2	1000	1,000,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Benzo(k)fluoranthene		207-08-9	70	70,000	< 240	240	< 240	240	< 260	260			< 270	270			290	280			< 260	260			
Bis(2-ethylhexyl)phthalate		117-81-7	90	90,000	< 240	240	750	240	< 260	260			< 270	270			< 280	280			< 260	260			
Carbazole		86-74-8			< 350	350	< 350	350	< 380	380			< 390	390			< 390	390			< 370	370			
Chrysene		218-01-9	70	70,000	< 240	240	< 240	240	< 260	260			< 270	270			450	280			< 260	260			
Dibenz(a,h)anthracene		53-70-3	0.7	700	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Dibenzofuran		132-64-9		100,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Fluoranthene		206-44-0	1000	1,000,000	< 240	240	< 240	240	< 260	260			< 270	270			850	280			< 260	260			
Fluorene		86-73-7	1000	1,000,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Indeno(1,2,3-cd)pyrene		193-39-5	7	7,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Isophorone		78-59-1		100,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Naphthalene		91-20-3	20	4,000	< 240	240	810	240	< 260	260			< 270	270			< 280	280			< 260	260			
Pentachlorophenol		87-86-5	3	3,000	< 350	350	< 350	350	< 380	380			< 390	390			< 390	390			< 370	370			
Phenanthrene		85-01-8	500	10,000	< 240	240	< 240	240	< 260	260			< 270	270			570	280			< 260	260			
Phenol		108-95-2	50	1,000	< 240	240	< 240	240	< 260	260			< 270	270			< 280	280			< 260	260			
Pyrene		129-00-0	1000	1,000,000	< 240	240	< 240	240	< 260	260			< 270	270			800	280			< 260	260			
Pyridine		110-86-1		500,000	< 350	350	< 350	350	< 380	380			< 390	390			< 390	390			< 370	370			
Oxygenates & Dioxane By SW8260C (OXY) (ug/kg)																									
1,4-Dioxane		123-91-1	6	200	< 84	84	< 49000	49,000			< 130	130			< 97	97			< 110	110			< 140	140	
Diethyl ether		60-29-7		100,000	< 4.2	4.2	< 6100	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
Di-isopropyl ether		108-20-3		100,000	< 4.2	4.2	< 6100	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
Ethyl tert-butyl ether		637-92-3		NE	< 4.2	4.2	< 6100	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	
tert-amyl methyl ether		994-05-8		NE	< 4.2	4.2	< 6100	6,100			< 6.3	6.3			< 4.9	4.9			< 5.7	5.7			< 6.8	6.8	

TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID				CELL 10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102		Lab Sample Id Collection Date Client Id Matrix	Method 1 S-1/GW-2	RCS-1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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					CP-5W3				CP-5E3				CP-5S3				CP-5N3				CP-5W6				CP-5E6				CP-5S6				CP-5N6				CP-5W9				CP-5S9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Conductivity - Soil Matrix (um/hos/cm)				PHNX - COND				NA				193				5				514				5				261				5				251				5				281				5				218				5				533				5				182				5				272				5				1,180				5				348				5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Flash Point (Degree F)				PHNX - FLASH POINT				NA				>200				200				>200				200				>200				200				>200				200				>200				200				>200				200				>200				200				>200				200																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Ignitability (Degree F)				PHNX - IGNITABILITY				Passed				140				Passed				140				Passed				140				Passed				140				Passed				140				Passed				140				Passed				140				Passed				140																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
pH at 25C - Soil				PHNX - PH								7.69				1.00				7.46				1.00				7.37				1.00				7.43				1.00				7.53				1.00				7.25				1.00				7.42				1.00				7.29				1.00				7.3				1.00				7.48				1.00				7.48				1.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Reactivity Cyanide (mg/kg)				PHNX - REACT CYANIDE								< 5				5				< 6				6				< 6				6				< 6				6				< 6				6				< 6				6				< 6				6				< 5				5				< 6				6				< 5				5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Reactivity Sulfide (mg/kg)				PHNX - REACT SULFIDE								< 20				20				< 20				20				< 20				20				< 20				20				< 20				20				< 20				20				< 20				20				< 20				20				< 20				20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID				CELL 10																											
Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102				Lab Sample Id Collection Date Client Id Matrix		Method 1 S-1/GW-2		RCS-1																							
										CE67594		CE67597		CE67603		CE67600		CE67595		CE67598		CE67604		CE67601		CE67596		CE67599		CE67605	
										11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019		11/21/2019	
										CP-5W3		CP-5E3		CP-5S3		CP-5N3		CP-5W6		CP-5E6		CP-5S6		CP-5N6		CP-5W9		CP-5E9		CP-5S9	
										Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA				CAS				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL						
Volatiles By SW8260C (ug/kg)				total		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
1,2,4-Trimethylbenzene				95-63-6		1,000,000		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
2-Isopropyltoluene				527-84-4		0		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
n-Butylbenzene				104-51-8		NE		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
n-Propylbenzene				103-65-1		100,000		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
o-Xylene				95-47-6		100,000		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
p-Isopropyltoluene				99-87-6		NE		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
sec-Butylbenzene				135-98-8		NA		< 5.6	5.6					< 6.4	6.4					< 4.3	4.3										
Semivolatiles By SW8270D (ug/kg)				total		32,360		0	318,400	28,000	67,010	5,200	48,140	0	27,830	0	537,430	32,000	74,900	0	378,680	29,700	1,820	0	0	0					
2-Methylnaphthalene				91-57-6		80		700	< 260	260	< 280	280	< 260	260	< 260	260	730	320	300	280	750	270	< 250	250	< 260	260	< 250	250			
Acenaphthene				83-32-9		1000		4,000	410	260	940	280	370	260	310	260	300	260	5,900	320	1,400	280	3,000	270	< 250	250	< 260	260	< 250	250	
Acenaphthylene				208-96-8		600		1,000	< 260	260	750	280	540	260	< 260	260	< 260	260	1,100	320	470	280	830	270	< 250	250	< 260	260	< 250	250	
Anthracene				120-12-7		1000		1,000,000	960	260	5,200	280	1,500	260	850	260	710	260	7,400	320	2,700	280	13,000	2,700	< 250	250	< 260	260	< 250	250	
Benz(a)anthracene				56-55-3		7		7,000	2,900	260	33,000	2,800	6,900	260	4,100	260	2,400	260	51,000	3,200	7,700	280	34,000	2,700	< 250	250	< 260	260	< 250	250	
Benzidine				92-87-5				10,000	< 260	260	< 280	280	< 260	260	< 260	260	< 320	320	< 280	280	< 270	270	< 250	250	< 260	260	< 250	250			
Benzo(a)pyrene				50-32-8		2		2,000	2,900	260	32,000	2,800	6,600	260	7,000	260	2,700	260	52,000	3,200	7,800	280	32,000	2,700	490	250	< 260	260	< 250	250	
Benzo(b)fluoranthene				205-99-2		7		7,000	2,400	260	26,000	2,800	5,500	260	5,900	260	2,000	260	44,000	3,200	7,200	280	26,000	2,700	300	250	< 260	260	< 250	250	
Benzo(ghi)perylene				191-24-2		1000		1,000,000	1,500	260	15,000	2,800	2,700	260	2,900	260	1,500	260	26,000	3,200	3,900	280	18,000	2,700	340	250	< 260	260	< 250	250	
Benzo(k)fluoranthene				207-08-9		70		70,000	2,600	260	26,000	2,800	4,400	260	5,000	260	2,100	260	36,000	3,200	4,800	280	23,000	2,700	290	250	< 260	260	< 250	250	
Bis(2-ethylhexyl)phthalate				117-81-7		90		90,000	< 260	260	1,400	280	380	260	< 260	260	< 260	260	< 320	320	< 280	280	< 270	270	< 250	250	< 260	260	< 250	250	
Carbazole				86-74-8					520	370	1,200	390	< 370	370	380	370	390	370	5,200	460	1,200	390	2,800	390	< 360	360	< 370	370	< 360	360	
Chrysene				218-01-9		70		70,000	2,900	260	30,000	2,800	6,300	260	4,400	260	2,500	260	49,000	3,200	7,400	280	31,000	2,700	< 250	250	< 260	260	< 250	250	
Dibenz(a,h)anthracene				53-70-3		0.7		700	360	260	4,900	280	940	260	800	260	430	260	8,800	320	350	280	4,000	270	< 250	250	< 260	260	< 250	250	
Dibenzofuran				132-64-9				100,000	280	260	450	280	< 260	260	< 260	260	< 260	260	2,300	320	830	280	2,000	270	< 250	250	< 260	260	< 250	250	
Fluoranthene				206-44-0		1000		1,000,000	4,500	260	51,000	2,800	11,000	2,600	4,900	260	4,100	260	80,000	3,200	7,600	280	61,000	2,700	< 250	250	< 260	260	< 250	250	
Fluorene				86-73-7		1000		1,000,000	330	260	1,200	280	380	260	< 260	260	< 260	260	4,500	320	1,100	280	3,000	270	< 250	250	< 260	260	< 250	250	
Indeno(1,2,3-cd)pyrene				193-39-5		7		7,000	1,700	260	18,000	2,800	3,200	260	3,300	260	1,800	260	31,000	3,200	4,800	280	20,000	2,700	400	250	< 260	260	< 250	250	
Isophorone				78-59-1				100,000	< 260	260	< 280	280	< 260	260	< 260	260	< 260	260	< 320	320	< 280	280	< 270	270	< 250	250	< 260	260	< 250	250	
Naphthalene				91-20-3		20		4,000	< 260	260	360	280	< 260	260	< 260	260	< 260	260	1,500	320	550	280	1,300	270	< 250	250	< 260	260	< 250	250	
Pentachlorophenol				87-86-5		3		3,000	< 370	370	< 390	390	< 370	370	< 370	370	< 370	370	< 460	460	< 390	390	< 390	390	< 360	360	< 370	370	< 360	360	
Phenanthrene				85-01-8		500		10,000	3,900	260	23,000	2,800	6,300	260	3,600	260	3,100	260	56,000	3,200	7,100	280	48,000	2,700	< 250	250	< 260	260	< 250	250	
Phenol				108-95-2		50		1,000	< 260	260	< 280	280	< 260	260	< 260	260	< 260	260	< 320	320	< 280	280	< 270	270	< 250	250	< 260	260	< 250	250	
Pyrene				129-00-0		1000		1,000,000	4,200	260	48,000	2,800	10,000	2,600	4,700	260	3,800	260	75,000	3,200	7,700	280	55,000	2,700	< 250	250	< 260	260	< 250	250	
Pyridine				110-86-1				500,000	< 370	370	< 390	390	< 370	370	< 370	370	< 370	370	< 460	460	< 390	390	< 390	390	< 360	360	< 370	370	< 360	360	
Oxygenates & Dioxane By SW8260C (OXY) (ug/kg)																															
1,4-Dioxane				123-91-1		6		200	< 110	110					< 130	130							< 86	86							
Diethyl ether				60-29-7				100,000	< 5.6	5.6					< 6.4	6.4							< 4.3	4.3							
Di-isopropyl ether				108-20-3				100,000	< 5.6	5.6					< 6.4	6.4							< 4.3	4.3							
Ethyl tert-butyl ether				637-92-3				NE	< 5.6	5.6					< 6.4	6.4							< 4.3	4.3							
tert-amyl methyl ether				994-05-8				NE	< 5.6	5.6					< 6.4	6.4							< 4.3	4.3							

**RTN 3-36184**  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Tested Compounds not shown do not exceed the laboratory reporting limits

TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID				Cell 10										CELL 13				CELL 14								
Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102		Lab Sample Id Collection Date Client Id Matrix	Method 1 S-1/GW-2	RCS-1																						
					CE67602		CE87843		CE88396		CE87844		CE88397		CE88402		CE88403		CE87852		CE88404		CE87853		CE88405	
					11/21/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019	
					CP-5N9		LOC 2 0-6		LOCATION 2 0-6 FT		LOC 2 6-12		LOCATION 2 6-12 FT		LOCATION 13 0-6 FT		LOCATION 13 6-12 FT		LOC 14 0-6		LOCATION 14 0-6 FT		LOC 14 6-12		LOCATION 14 6-12 FT	
					Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA		CAS		Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	
Volatiles By SW8260C (ug/kg)		total		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1,2,4-Trimethylbenzene		95-63-6	1,000,000					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
2-Isopropyltoluene		527-84-4	0					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
n-Butylbenzene		104-51-8	NE					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
n-Propylbenzene		103-65-1	100,000					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
o-Xylene		95-47-6	100,000					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
p-Isopropyltoluene		99-87-6	NE					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
sec-Butylbenzene		135-98-8	NA					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5	
Semivolatiles By SW8270D (ug/kg)		total		4,620		0	151,980	18,900	0	0	8,610	0	0	0	6,190	0	0	0	19,710	0	0	0	93,360	7,800	0	0
2-Methylnaphthalene		91-57-6	80	700	< 250	250	310	270			< 260	260			< 270	270	< 270	270	< 270	270			450	260		
Acenaphthene		83-32-9	1000	4,000	< 250	250	1,900	270			< 260	260			< 270	270	< 270	270	< 270	270			1,600	260		
Acenaphthylene		208-96-8	600	1,000	< 250	250	300	270			< 260	260			< 270	270	< 270	270	< 270	270			< 260	260		
Anthracene		120-12-7	1000	1,000,000	< 250	250	4,500	270			< 260	260			< 270	270	< 270	270	< 270	270			3,400	260		
Benz(a)anthracene		56-55-3	7	7,000	450	250	13,000	2,700			800	260			580	270	< 270	270	1,800	270			6,600	260		
Benzidine		92-87-5		10,000	< 250	250	< 270	270			< 260	260			< 270	270	< 270	270	< 270	270			< 260	260		
Benzo(a)pyrene		50-32-8	2	2,000	490	250	12,000	2,700			820	260			580	270	< 270	270	1,900	270			5,400	260		
Benzo(b)fluoranthene		205-99-2	7	7,000	370	250	9,600	2,700			670	260			460	270	< 270	270	1,700	270			4,400	260		
Benzo(ghi)perylene		191-24-2	1000	1,000,000	300	250	5,200	270			550	260			380	270	< 270	270	1,300	270			2,400	260		
Benzo(k)fluoranthene		207-08-9	70	70,000	350	250	5,300	270			610	260			380	270	< 270	270	1,500	270			3,600	260		
Bis(2-ethylhexyl)phthalate		117-81-7	90	90,000	< 250	250	< 270	270			< 260	260			< 270	270	< 270	270	< 270	270			< 260	260		
Carbazole		86-74-8			< 360	360	2,400	380			< 370	370			< 380	380	< 380	380	< 380	380			1,300	380		
Chrysene		218-01-9	70	70,000	440	250	12,000	2,700			760	260			570	270	< 270	270	1,900	270			6,000	260		
Dibenz(a,h)anthracene		53-70-3	0.7	700	< 250	250	1,400	270			< 260	260			< 270	270	< 270	270	330	270			750	260		
Dibenzofuran		132-64-9		100,000	< 250	250	1,200	270			< 260	260			< 270	270	< 270	270	< 270	270			930	260		
Fluoranthene		206-44-0	1000	1,000,000	770	250	28,000	2,700			1,600	260			1,100	270	< 270	270	3,100	270			18,000	2,600		
Fluorene		86-73-7	1000	1,000,000	< 250	250	1,700	270			< 260	260			< 270	270	< 270	270	< 270	270			1,200	260		
Indeno(1,2,3-cd)pyrene		193-39-5	7	7,000	310	250	5,700	270			520	260			390	270	< 270	270	1,400	270			2,800	260		
Isophorone		78-59-1		100,000	< 250	250	< 270	270			< 260	260			< 270	270	< 270	270	< 270	270			< 260	260		
Naphthalene		91-20-3	20	4,000	< 250	250	470	270			< 260	260			< 270	270	< 270	270	< 270	270			530	260		
Pentachlorophenol		87-86-5	3	3,000	< 360	360	< 380	380			< 370	370			< 380	380	< 380	380	< 380	380			< 380	380		
Phenanthrene		85-01-8	500	10,000	480	250	23,000	2,700			880	260			810	270	< 270	270	1,500	270			18,000	2,600		
Phenol		108-95-2	50	1,000	< 250	250	< 270	270			< 260	260			< 270	270	< 270	270	< 270	270			< 260	260		
Pyrene		129-00-0	1000	1,000,000	660	250	24,000	2,700			1,400	260			940	270	< 270	270	2,900	270			16,000	2,600		
Pyridine		110-86-1		500,000	< 360	360	< 380	380			< 370	370			< 380	380	< 380	380	< 380	380			< 380	380		
Oxygenates & Dioxane By SW8260C (OXY) (ug/kg)																										
1,4-Dioxane		123-91-1	6	200					< 110	110			< 150	150	< 180	180	< 110	110			< 93	93			< 89	89
Diethyl ether		60-29-7		100,000					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5
Di-isopropyl ether		108-20-3		100,000					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5
Ethyl tert-butyl ether		637-92-3		NE					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5
tert-amyl methyl ether		994-05-8		NE					< 5.6	5.6			< 7.4	7.4	< 9.2	9.2	< 5.6	5.6			< 4.7	4.7			< 4.5	4.5

TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

Grid Cell ID	CELL 15														CELL 16		Maximum Concentration	Minimum Concentration		
Phoenix Environmental Laboratories, Inc.  587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102  Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA	Lab Sample Id Collection Date Client Id Matrix  CAS	Method 1 S-1/GW-2	RCS-1																	
				CE87851		CE88406		CE87849		CE88407		CE87850		CE88408		CE68608				
				12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019		11/22/2019				
				LOC 15 0-3		LOCATION 15 0-3 FT		LOC 15 3-6		LOCATION 15 3-6 FT		LOC 15 6-12		LOCATION 15 6-12 FT		CP-18 2-3 FT				
				Soil		Soil		Soil		Soil		Soil		Soil		Soil				
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL			
Miscellaneous/Inorganics																				
Percent Solid (%)	PHNX - PCTSOLID		NA	84				87				89				92				
Conductivity - Soil Matrix (um/hos/cm)	PHNX - COND		NA	239	5			208	5			775	5			98	5			
Corrosivity (Pos/Neg)	PHNX - CORROSIVITY		NA	Negative				Negative				Negative				Negative				
Flash Point (Degree F)	PHNX - FLASH POINT		NA	>200	200			>200	200			>200	200			>200	200			
Ignitability (Degree F)	PHNX - IGNITABILITY			Passed	140			Passed	140			Passed	140			Passed	140			
pH at 25C - Soil	PHNX - PH			7.61	1.00			8.12	1.00			7.72	1.00			7.88	1.00			
Reactivity Cyanide (mg/kg)	PHNX - REACT CYANIDE			< 6	6			< 6	6			< 5	5			< 5	5			
Reactivity Sulfide (mg/kg)	PHNX - REACT SULFIDE			< 20	20			< 20	20			< 20	20			< 20	20			
Reactivity (Pos/Neg)	PHNX - REACTIVITY			Negative				Negative				Negative				Negative				
Metals, Total (mg/kg)	total																			
Antimony	7440-36-0	20	20	< 3.5	3.5			< 3.6	3.6			< 3.7	3.7			< 3.6	3.6			
Arsenic	7440-38-2	20	20	4.93	0.71			3.78	0.73			< 0.75	0.75			2.58	0.72	9.53	0.85	
Barium	7440-39-3	1000	1,000	57.7	0.35			15.4	0.36			12.5	0.37			11	0.36	324	8.42	
Beryllium	7440-41-7	90	90	0.37	0.28			0.32	0.29			< 0.30	0.30			0.32	0.29	0.53	0.32	
Cadmium	7440-43-9	70	70	0.47	0.35			< 0.36	0.36			< 0.37	0.37			< 0.36	0.36	4.67	0.47	
Chromium	7440-47-3	100	100	17.2	0.35			15.1	0.36			8.84	0.37			10.4	0.36	23.1	7.86	
Lead	7439-92-1	200	200	306	0.35			5.11	0.36			3.8	0.37			3.13	0.36	3520	2.96	
Mercury	7439-97-6	20	20	0.17	0.03			< 0.03	0.03			< 0.03	0.03			< 0.03	0.03	3.49	0.04	
Nickel	7440-02-0	600	600	14	0.35			11.2	0.36			7.89	0.37			7.38	0.36	17.5	5.95	
Selenium	7782-49-2	400	400	< 1.4	1.4			< 1.5	1.5			< 1.5	1.5			< 1.4	1.4	0	0	
Silver	7440-22-4	100	100	< 0.35	0.35			< 0.36	0.36			< 0.37	0.37			< 0.36	0.36	0.45	0.45	
Thallium	7440-28-0	8	8	< 3.2	3.2			< 3.3	3.3			< 3.4	3.4			< 3.3	3.3	0	0	
Vanadium	7440-62-2	400	400	28.5	0.35			29.2	0.36			13.1	0.37			18.6	0.36	31.8	12.8	
Zinc	7440-66-6	1000	1,000	125	0.7			27.9	0.7			17.9	0.7			17	0.7	594	16.4	
Metals, TCLP (mg/l)	total																			
TCLP Lead	7439-92-1			5.31	0.10															
TCLP Barium	7440-39-3																			
TCLP Chromium	7440-47-3																			
TPH By SW8015D DRO (mg/kg)	total	1000	1000																	
Fuel Oil #2 / Diesel Fuel	68476-30-2			< 300	300			< 56	56			< 55	55			< 54	54			
Fuel Oil #4	68476-31-3			< 300	300			< 56	56			< 55	55			< 54	54			
Fuel Oil #6	68553-00-4			< 300	300			< 56	56			< 55	55			< 54	54			
Kerosene	8008-20-6			< 300	300			< 56	56			< 55	55			< 54	54			
Motor Oil	PHNX - MOTOR OIL			< 300	300			< 56	56			< 55	55			< 54	54			
Other Oil	PHNX - OTHER OIL			**	300			< 56	56			< 55	55			< 54	54			
Unidentified	PHNX - TPH			480	300			< 56	56			< 55	55			< 54	54	2600	60	
TPH By MA VPH 5/2004 (mg/kg)	total																			
Benzene	71-43-2		2			< 0.032	0.032			< 0.034	0.034			< 0.028	0.028					
C5-C8 Aliphatic Hydrocarbons *1,2	PHNX - C5-C8		100			< 6.4	6.4			< 6.8	6.8			< 5.5	5.5					
C9-C10 Aromatic Hydrocarbons *1	PHNX - C9-C10					< 6.4	6.4			< 6.8	6.8			< 5.5	5.5			1300	ND	
C9-C12 Aliphatic Hydrocarbons *1,3	PHNX - C9-C12		1000			< 6.4	6.4			< 6.8	6.8			< 5.5	5.5			4400	ND	
Ethyl Benzene	100-41-4		40			< 0.064	0.064			< 0.068	0.068			< 0.055	0.055			16	ND	
m,p-Xylenes	179601-23-1		100			< 0.064	0.064			< 0.068	0.068			< 0.055	0.055			4.6	ND	
MTBE	1634-04-4		0.1			< 0.064	0.064			< 0.068	0.068			< 0.055	0.055					
Naphthalene	91-20-3		4			< 0.32	0.32			< 0.34	0.34			< 0.28	0.28					
o-Xylene	95-47-6		100			< 0.064	0.064			< 0.068	0.068			< 0.055	0.055			5.3	ND	
Toluene	108-88-3		30			< 0.064	0.064			< 0.068	0.068			< 0.055	0.055					
Unadjusted C5-C8 Aliphatics (*1)	PHNX - UNC5-C8		100			< 6.4	6.4			< 6.8	6.8			< 5.5	5.5					
Unadjusted C9-C12 Aliphatics (*1)	PHNX - UNC9-C12		1000			< 6.4	6.4			< 6.8	6.8			< 5.5	5.5			5700	ND	
PCBs By SW8082A (ug/kg)	total	1																		
PCB-1242	53469-21-9	1	1,000	< 77	77			< 76	76			< 73	73			< 70	70	1900	1900	
PCB-1248	12672-29-6	1	1,000	< 77	77			< 76	76			< 73	73			< 70	70	510	230	
PCB-1254	11097-69-1	1	1,000	110	77			< 76	76			< 73	73			< 70	70	1300	110	



TABLE 3A  
LABORATORY ANALYTICAL RESULTS - SOIL  
(Clean Properties, Inc. 2019)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project No. 6735

CELL 15																	CELL 16		Maximum Concentration	Minimum Concentration		
Phoenix Environmental Laboratories, Inc. 587 East Middle Turnpike P.O. Box 370 Manchester, CT 06040 (860) 645-1102		Lab Sample Id Collection Date  Client Id Matrix	Method 1 S-1/GW-2	RCS-1																		
					CE87851				CE88406		CE87849		CE88407		CE87850		CE88408				CE68608	
					12/13/2019				12/13/2019		12/13/2019		12/13/2019		12/13/2019		12/13/2019				11/22/2019	
					LOC 15 0-3				LOCATION 15 0-3 FT		LOC 15 3-6		LOCATION 15 3-6 FT		LOC 15 6-12		LOCATION 15 6-12 FT				CP-18 2-3 FT	
					Soil				Soil		Soil		Soil		Soil		Soil				Soil	
Project Id : 515 SOMERVILLE AVE., SOMERVILLE, MA		CAS			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL				
Volatiles By SW8260C (ug/kg)		total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	367200	0		
1,2,4-Trimethylbenzene		95-63-6	1,000,000		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	57000	6100				
2-Isopropyltoluene		527-84-4	0		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	4100	3600				
n-Butylbenzene		104-51-8	NE		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	16000	6100				
n-Propylbenzene		103-65-1	100,000		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	8800	6100				
o-Xylene		95-47-6	100,000		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	6100	6100				
p-Isopropyltoluene		99-87-6	NE		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	13000	6100				
sec-Butylbenzene		135-98-8	NA		< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9	14000	6100				
Semivolatiles By SW8270D (ug/kg)		total		50,770	2,700	0	0	0	0	0	0	0	0	0	0	0	0					
2-Methylnaphthalene		91-57-6	80	700	< 270	270			< 260	260			< 260	260			< 250	250	750	300		
Acenaphthene		83-32-9	1000	4,000	620	270			< 260	260			< 260	260			< 250	250	5900	300		
Acenaphthylene		208-96-8	600	1,000	< 270	270			< 260	260			< 260	260			< 250	250	1100	300		
Anthracene		120-12-7	1000	1,000,000	1,300	270			< 260	260			< 260	260			< 250	250	13000	380		
Benz(a)anthracene		56-55-3	7	7,000	4,400	270			< 260	260			< 260	260			< 250	250	51000	440		
Benzidine		92-87-5		10,000	< 270	270			< 260	260			< 260	260			< 250	250	0	0		
Benzo(a)pyrene		50-32-8	2	2,000	4,000	270			< 260	260			< 260	260			< 250	250	52000	400		
Benzo(b)fluoranthene		205-99-2	7	7,000	3,400	270			< 260	260			< 260	260			< 250	250	44000	300		
Benzo(ghi)perylene		191-24-2	1000	1,000,000	2,300	270			< 260	260			< 260	260			< 250	250	26000	300		
Benzo(k)fluoranthene		207-08-9	70	70,000	3,000	270			< 260	260			< 260	260			< 250	250	36000	290		
Bis(2-ethylhexyl)phthalate		117-81-7	90	90,000	< 270	270			< 260	260			< 260	260			< 250	250	1400	380		
Carbazole		86-74-8			490	390			< 370	370			< 370	370			< 350	350	5200	380		
Chrysene		218-01-9	70	70,000	4,200	270			< 260	260			< 260	260			< 250	250	49000	440		
Dibenz(a,h)anthracene		53-70-3	0.7	700	640	270			< 260	260			< 260	260			< 250	250	8800	330		
Dibenzofuran		132-64-9		100,000	< 270	270			< 260	260			< 260	260			< 250	250	2300	280		
Fluoranthene		206-44-0	1000	1,000,000	11,000	2,700			< 260	260			< 260	260			< 250	250	80000	770		
Fluorene		86-73-7	1000	1,000,000	420	270			< 260	260			< 260	260			< 250	250	4500	330		
Indeno(1,2,3-cd)pyrene		193-39-5	7	7,000	2,600	270			< 260	260			< 260	260			< 250	250	31000	310		
Isophorone		78-59-1		100,000	< 270	270			< 260	260			< 260	260			< 250	250	0	0		
Naphthalene		91-20-3	20	4,000	< 270	270			< 260	260			< 260	260			< 250	250	1500	360		
Pentachlorophenol		87-86-5	3	3,000	< 390	390			< 370	370			< 370	370			< 350	350	0	0		
Phenanthrene		85-01-8	500	10,000	5,400	270			< 260	260			< 260	260			< 250	250	56000	480		
Phenol		108-95-2	50	1,000	< 270	270			< 260	260			< 260	260			< 250	250	0	0		
Pyrene		129-00-0	1000	1,000,000	7,000	270			< 260	260			< 260	260			< 250	250	75000	660		
Pyridine		110-86-1		500,000	< 390	390			< 370	370			< 370	370			< 350	350	0	0		
Oxygenates & Dioxane By SW8260C (OXY) (ug/kg)																						
1,4-Dioxane		123-91-1	6	200			< 110	110			< 100	100			< 79	79	< 78	78				
Diethyl ether		60-29-7		100,000			< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9				
Di-isopropyl ether		108-20-3		100,000			< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9				
Ethyl tert-butyl ether		637-92-3	NE				< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9				
tert-amyl methyl ether		994-05-8	NE				< 5.6	5.6			< 5.2	5.2			< 4.0	4.0	< 3.9	3.9				



TABLE 3B -  
ANALYTICAL RESULTS - SOIL (Clean Properties, Inc. 2018)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project 6735

515 Sommerville Avenue Sample Analysis Summary Table Sample Collected November 15, 2018																	
CELL ID			CELL 1		CELL 2		CELL 4		CELL 6			CELL 7		CELL 8		CELL 9	
Detected Contaminants	Reportable Concentration Limits	Method 1 S-1/GW-2 Standards	SA														
			CP 9		CP 8		CP 7		CP 10			CP 2		CP 12		CP 4	
			0 - 3 ft	3 - 5 ft	0 - 3 ft	3 - 5 ft	0 - 2 ft	2 - 5 ft	0 - 3 ft	3 - 6 ft	6 - 11 ft	0 - 5 ft	5 - 11 ft	0 - 3 ft	3 - 7 ft	0 - 5 ft	10 ft
	RCS-1																
Volatile Organic Compounds (VOCs), USEPA Method 8260C																	
Total VOCs	CS	4	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs), USEPA Method 8270D																	
Total SVOCs	CS	100	ND	ND	ND	ND	NA	4.41	NA	ND	ND	ND	ND	ND	ND	ND	ND
2-Methlynaphthalene		80	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Acenaphthene	1	1000	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Acenaphthylene	4	600	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Anthracene	1000	1000	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Benz(a)anthracene	7	7	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.39	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Benzo(a)pyrene	2	2	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.42	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Benzo(b)fluoranthene	7	7	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.40	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Benzo(ghi)perylene	1000	1000	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.35	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Benzo(k)fluoranthene	70	70	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.38	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Benzyl butyl phthlate	NE		ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Bis(2-ethylhexyl)phthalate	NE	90	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Carbazole	NE		ND(0.35)	ND(0.45)	ND(0.38)	ND(0.39)	NA	ND(0.44)	NA	ND(0.42)	ND(0.4)	ND(0.39)	ND(0.39)	ND(0.39)	ND(0.44)	ND(0.37)	ND(0.37)
Chrysene	70	70	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.45	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Dibenz(a,h)anthracene	1	1	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Dibenzofuran	NE		ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Fluoranthene	1000	1000	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.66	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Fluorene	1000	1000	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Indeno(1,2,3-cd)pyrene	7	7	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.31	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Naphthalene	4	20	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	ND(0.31)	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Phenanthrene	10	500	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.42	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Pyrene	1000	1000	ND(0.25)	ND(0.32)	ND(0.27)	ND(0.27)	NA	0.63	NA	ND(0.29)	ND(0.28)	ND(0.27)	ND(0.27)	ND(0.28)	ND(0.31)	ND(0.26)	ND(0.26)
Total Petroleum Hydrocarbons (TPH), USEPA Method 8015D DRO																	
Total TPH	1000	1000	ND(0.053)	ND(0.068)	ND(0.057)	ND(0.059)	NA	ND(0.066)	NA	ND(0.062)	ND(0.059)	ND(0.06)	ND(0.057)	ND(0.06)	ND(0.065)	ND(0.055)	ND(0.055)
Unidentified			ND(0.053)	ND(0.068)	ND(0.057)	ND(0.059)	NA	ND(0.066)	NA	ND(0.062)	ND(0.059)	ND(0.06)	ND(0.075)	ND(0.06)	ND(0.065)	ND(0.055)	ND(0.055)

TABLE 3B -  
ANALYTICAL RESULTS - SOIL (Clean Properties, Inc. 2018)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project 6735

515 Sommerville Avenue  
Sample Analysis Summary Table  
Sample Collected November 15, 2018

CELL ID			CELL 1		CELL 2		CELL 4		CELL 6			CELL 7		CELL 8		CELL 9		
Detected Contaminants	Reportable Concentration Limits	Method 1 S-1/GW-2 Standards	SA															
			CP 9		CP 8		CP 7		CP 10			CP 2		CP 12		CP 4		
			0 - 3 ft	3 - 5 ft	0 - 3 ft	3 - 5 ft	0 - 2 ft	2 - 5 ft	0 - 3 ft	3 - 6 ft	6 - 11 ft	0 - 5 ft	5 - 11 ft	0 - 3 ft	3 - 7 ft	0 - 5 ft	10 ft	
	RCS-1																	
Polychlorinated Biphenyls (PCBs), USEPA Method 8082A																		
Total PCBs	1	1	ND(0.071)	ND(0.090)	ND(0.075)	ND(0.078)	NA	ND(0.087)	NA	ND(0.081)	ND(0.079)	ND(0.080)	ND(0.078)	ND(0.081)	ND(0.088)	ND(0.073)	ND(0.074)	
Metals																		
Silver	100	100	ND(0.37)	ND(0.41)	ND(0.38)	ND(0.36)	NA	ND(0.48)	NA	ND(0.41)	ND(0.40)	ND(0.42)	ND(0.41)	ND(0.36)	ND(0.40)	ND(0.39)	ND(0.39)	
Arsenic	20	20	2.77	2.56	5.42	0.90	NA	4.61	NA	4.59	4.07	4.85	4.23	5.63	0.89	2.44	ND(0.77)	
Barium	1000	1000	23.9	17.3	19.7	25	NA	49.6	NA	28.8	19.3	23.8	13.8	67.5	15.1	12.2	11.2	
Beryllium	90	90	0.32	ND(0.33)	0.34	ND(0.29)	NA	0.57	NA	0.41	0.33	0.40	ND(0.33)	0.73	ND(0.32)	ND(0.31)	ND(0.31)	
Cadmium	70	70	0.86	ND(0.41)	ND(0.38)	ND(0.36)	NA	ND(0.48)	NA	ND(0.41)	ND(0.40)	ND (0.42)	ND(0.41)	0.45	ND(0.40)	ND(0.39)	ND(0.39)	
Chromium	100	100	9.88	10.2	10.9	9.27	NA	17.9	NA	14.5	10.8	13.4	11.7	20.7	8.64	7.17	8.9	
Mercury	20	20	ND(0.03)	ND(0.04)	ND(0.03)	ND(0.03)	NA	0.25	NA	ND(0.03)	ND(0.03)	ND(0.03)	ND(0.03)	0.33	ND(0.03)	0.11	ND(0.03)	
Nickel	600	600	14.6	8.22	6.53	5.71	NA	15.5	NA	10.1	8.05	10.00	9.07	15.5	9.01	6.5	7.87	
Lead	200	200	31.30	13.30	28.10	2.44	NA	109.00	NA	4.58	3.21	78.70	4.36	160.00	5.81	13.00	3.15	
Antimony	20	20	ND(3.7)	ND(4.1)	ND(3.8)	ND(3.6)	NA	ND(4.8)	NA	ND(4.1)	ND(4.0)	ND (4.2)	ND (4.1)	ND(3.6)	ND(4.0)	ND(3.9)	ND(3.9)	
Selenium	400	400	ND(1.5)	ND(1.7)	ND(1.5)	ND(1.4)	NA	ND(1.9)	NA	ND(1.6)	ND(1.6)	ND(1.7)	ND(1.6)	ND(1.5)	ND(1.6)	ND(1.5)	ND(1.5)	
TCLP Lead (mg/L)	5	Passed	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	NA	ND(0.10)	NA	ND(0.10)	ND(0.10)	1.2	ND (0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	
Thallium	8	8	ND(3.4)	ND(3.7)	ND(3.4)	ND(3.2)	NA	ND(4.3)	NA	ND(3.7)	ND(3.6)	ND(3.8)	ND(3.7)	ND(3.3)	ND(3.6)	ND(3.5)	ND(3.5)	
Vanadium	400	400	20.2	14.5	18.1	14.7	NA	26.8	NA	22.5	18.3	22.9	21.9	32.4	13.0	12.7	13.3	
Zinc	1000	1000	54.5	25.1	24.6	14.7	NA	88.8	NA	23.4	17.9	42.8	18.1	101	17.9	24.4	19.3	
Hazardous Characteristics																		
Percent Solids (%)	NE		93	73	87	84	NA	75	94	80	82	83	86	82	75	91	90	
Conductivity-Soil Matrix (µmhos/cm)	NE		40	68	57	21	NA	566	NA	36	28	111	83	215	152	137	43	
Corrosivity <sup>2</sup>	None		Negative	Negative	Negative	Negative	NA	Negative	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	
pH (pH units)	≤2 or ≥12.5		7.36	7.11	7.77	7.56	NA	7.58	NA	6.75	6.68	7.84	7.86	5.62	6.26	5.12	6.37	
Ignitability <sup>1</sup>	Passed		Passed	Passed	Passed	Passed	NA	Passed	NA	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	
Flash Point (°F)	<140°F		>200	>200	>200	>200	NA	>200	NA	>200	>200	>200	>200	>200	>200	>200	>200	
Reactivity <sup>3</sup>	None		Negative	Negative	Negative	Negative	NA	Negative	NA	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	
Reactivity - Cyanide			<5	<6	<6	<6	NA	<6	NA	<6	<5	<6	<6	<6	<6	<5	<5	
Reactivity - Sulfide			<20	<20	<20	<20	NA	<20	NA	<20	<20	<20	<20	<20	<20	<20	<20	
DISPOSAL DESIGNATION			LESS THAN RCS-1		UNLINED		UNLINED		UNLINED		OUT-OF-STATE		UNLINED		LESS THAN RCS-1		LESS THAN RCS-1	

Detected Concentrations in **Bold Black** exceed the applicable MCP Soil S-1 Reportable Concentration

Detected Concentrations in **Bold Blue** exceed the Massachusetts Unlined Landfill Limit

Detected Concentrations in **Bold Red** exceed the Massachusetts Lined Landfill Limit

Detected Concentrations that are Underlined exceed the TCLP 20x Rule, necessitating TCLP analysis

ND = Not Detected (Laboratory detection limits in parentheses)

NA = Not Analyzed

NE = Not Established

CS = Compound-Specific Standards

mg/kg = Milligrams per kilogram

µmhos/cm = Micromhos per centimeter

\* Number equals Toxicity Characteristic Leaching Procedure (TCLP) standard in mg/kg x 20, which if equaled or exceeded requires a TCLP test.

Calculated in accordance with 310 CMR 30.125 and USEPA Memorandum #36, Notes on RCRA Methods and QA Activities, and 40 CFR Part 261, Appendix II, Section 1.2.

<sup>1</sup>Ignitability defined in 310 CMR 30.122; flashpoint limit is applicable to liquids.

<sup>2</sup>Corrosivity defined in 310 CMR 30.123

<sup>3</sup>Reactivity defined in 310 CMR 30.124

TABLE 3B -  
ANALYTICAL RESULTS - SOIL (Clean Properties, Inc. 2018)

RTN 3-36184  
515 Somerville Avenue; Somerville, MA  
Project 6735

515 Sommerville Avenue Sample Analysis Summary Table Sample Collected November 15, 2018																	
CELL ID			CELL 10		CELL 11			CELL 12		CELL 14		CELL 17			-		
Detected Contaminants	Reportable Concentration Limits	Method 1 S-1/GW-2 Standards	MPLE														
			CP 5		CP 13			CP 14		CP 3		CP 15			CP 11		
			0-5 ft	5 - 11 ft	0 - 3 ft	3 - 7 ft	7 - 9 ft	0 - 5.5 ft	5.5 - 9 ft	0 - 5.5 ft	5.5 - 11 ft	0 - 3 ft	3 - 6.5 ft	6.5 - 10 ft	0 - 3.5 ft	3.5 - 6.5 ft	6.5 - 7.5 ft
	RCS-1		(Values in mg/kg unless otherwise noted)														
Volatile Organic Compounds (VOCs), USEPA Method 8260C																	
Total VOCs	CS	4	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs), USEPA Method 8270D																	
Total SVOCs	CS	100	432.3	ND	NA	ND	ND	ND	ND	0.72	11.18	NA	ND	ND	ND	NA	ND
2-Methlynaphthalene		80	0.9	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Acenaphthene	1	1000	5.9	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Acenaphthylene	4	600	0.78	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Anthracene	1000	1000	12	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.43	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Benz(a)anthracene	7	7	38	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.97	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Benzo(a)pyrene	2	2	35	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.80	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Benzo(b)fluoranthene	7	7	29	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.70	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Benzo(ghi)perylene	1000	1000	21	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.50	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Benzo(k)fluoranthene	70	70	29	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.73	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Benzyl butyl phthlate	NE		0.33	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Bis(2-ethylhexyl)phthalate	NE	90	0.69	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Carbazole	NE		4.6	ND(0.37)	NA	ND(0.35)	ND(0.44)	ND(0.37)	ND(0.39)	ND(0.37)	ND(0.39)	NA	ND(0.37)	ND(0.4)	ND(0.034)	NA	ND(0.045)
Chrysene	70	70	38	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.97	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Dibenz(a,h)anthracene	1	1	5.1	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Dibenzofuran	NE		2.6	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Fluoranthene	1000	1000	68	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	0.38	2.00	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Fluorene	1000	1000	4.5	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Indeno(1,2,3-cd)pyrene	7	7	23	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	0.58	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Naphthalene	4	20	1.9	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	ND(0.28)	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Phenanthrene	10	500	57	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	ND(0.26)	1.80	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Pyrene	1000	1000	55	ND(0.26)	NA	ND(0.25)	ND(0.31)	ND(0.26)	ND(0.27)	0.34	1.70	NA	ND(0.26)	ND(0.28)	ND(0.024)	NA	ND(0.31)
Total Petroleum Hydrocarbons (TPH), USEPA Method 8015D DRO																	
Total TPH	1000	1000	1300	ND(0.056)	NA	ND(0.053)	ND(0.067)	ND(0.054)	ND(0.059)	ND(0.057)	110	NA	ND(0.054)	ND(0.062)	ND(0.051)	NA	ND(0.068)
Unidentified			1300	ND(0.056)	NA	ND(0.053)	ND(0.067)	ND(0.054)	ND(0.059)	ND(0.057)	110	NA	ND(0.054)	ND(0.062)	ND(0.051)	NA	ND(0.068)

**TABLE 3B -**  
**ANALYTICAL RESULTS - SOIL (Clean Properties, Inc. 2018)**

**RTN 3-36184**  
515 Somerville Avenue; Somerville, MA  
Project 6735

515 Somerville Avenue Sample Analysis Summary Table Sample Collected November 15, 2018																		
CELL ID			CELL 10		CELL 11			CELL 12		CELL 14		CELL 17			-			
Detected Contaminants	Reportable Concentration Limits	Method 1 S-1/GW-2 Standards	MPLE															
			CP 5		CP 13			CP 14		CP 3		CP 15			CP 11			
	0-5 ft	5 - 11 ft	0 - 3 ft	3 - 7 ft	7 - 9 ft	0 - 5.5 ft	5.5 - 9 ft	0 - 5.5 ft	5.5 - 11 ft	0 - 3 ft	3 - 6.5 ft	6.5 - 10 ft	0 - 3.5 ft	3.5 - 6.5 ft	6.5 - 7.5 ft			
RCS-1			(Values in mg/kg unless otherwise noted)															
Polychlorinated Biphenyls (PCBs), USEPA Method 8082A																		
Total PCBs	1	1	0.2	ND(0.075)	NA	ND(0.070)	ND(0.089)	ND(0.072)	ND(0.077)	ND(0.076)	ND(0.079)	NA	ND(0.072)	ND(0.081)	ND(0.069)	NA	ND(0.091)	
Metals																		
Silver	100	100	ND(0.39)	ND(0.40)	NA	ND(0.36)	ND(0.40)	ND(0.33)	ND(0.39)	ND(0.38)	ND(0.42)	NA	ND(0.34)	ND(0.38)	ND(0.37)	NA	ND(0.45)	
Arsenic	20	20	5.25	2.27	NA	3.48	2.84	6.00	2.82	3.30	3.92	NA	3.51	4.38	3.72	NA	2.25	
Barium	1000	1000	270	12.7	NA	11	16.9	12.1	10.3	27.1	41.3	NA	19.3	12.7	11.5	NA	9.28	
Beryllium	90	90	0.37	ND(0.32)	NA	ND(0.29)	ND(0.32)	0.37	ND(0.31)	0.35	0.4	NA	0.32	ND(0.30)	0.4	NA	ND(0.36)	
Cadmium	70	70	3.58	ND(0.40)	NA	ND(0.36)	ND(0.40)	0.50	ND(0.39)	ND(0.38)	ND(0.42)	NA	ND(0.34)	ND(0.38)	ND(0.37)	NA	ND(0.45)	
Chromium	100	100	15.9	14.2	NA	10.1	11.5	11.8	11.1	17.70	13.5	NA	12.70	12.40	13.7	NA	9.0	
Mercury	20	20	0.89	ND(0.03)	NA	ND(0.03)	ND(0.03)	ND(0.03)	ND(0.03)	0.06	0.14	NA	ND(0.03)	ND(0.03)	ND(0.03)	NA	ND(0.03)	
Nickel	600	600	10.6	13.8	NA	9.47	10.9	13.3	8.97	11.6	11.4	NA	9.34	8.1	8.81	NA	9.03	
Lead	200	200	3020	5.16	NA	3.76	4.64	8.42	5.22	49.00	90.00	NA	5.18	6.11	10.10	NA	7.72	
Antimony	20	20	ND(3.9)	ND(4.0)	NA	ND(3.6)	ND(4.0)	ND(3.3)	ND(3.9)	ND (3.8)	ND(4.2)	NA	ND(3.4)	ND(3.8)	ND(3.7)	NA	ND(4.5)	
Selenium	400	400	ND(1.6)	ND(1.6)	NA	ND(1.5)	ND(1.6)	ND(1.3)	ND(1.6)	ND(1.5)	ND(1.7)	NA	ND(1.4)	ND(1.5)	ND(1.5)	NA	ND(1.8)	
TCLP Lead (mg/L)	5	Passed	9.78	ND(0.10)	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.13	NA	ND(0.10)	ND(0.10)	ND(0.10)	NA	ND(0.10)	
Thallium	8	8	ND(3.5)	ND(3.6)	NA	ND(3.3)	ND(3.6)	ND(3.0)	ND(3.5)	ND(3.4)	ND(3.8)	NA	ND(3.10)	ND(3.4)	ND(3.3)	NA	ND(4.1)	
Vanadium	400	400	24.7	25.6	NA	17.4	18.6	24.6	17.5	24.3	28	NA	21.6	23.9	16.2	NA	15.7	
Zinc	1000	1000	557	23.5	NA	15.9	33.7	72.9	33.3	32.4	47.5	NA	23.4	23.8	14	NA	29.1	
Hazardous Characteristics																		
Percent Solids (%)	NE		80	87	92	93	74	90	85	87	83	89	91	81	95	89	73	
Conductivity-Soil Matrix (µmhos/cm)	NE		304	471	NA	71	60	82	153	137	245	NA	116	81	31	NA	406	
Corrosivity <sup>2</sup>	None		Negative	Negative	NA	Negative	Negative	Negative	Negative	Negative	Negative	NA	Negative	Negative	Negative	NA	Negative	
pH (pH units)	≤2 or ≥12.5		7.88	7.89	NA	6.60	6.41	7.42	7.52	8.41	8.47	NA	6.70	5.65	5.71	NA	5.65	
Ignitability <sup>1</sup>	Passed		Passed	Passed	NA	Passed	Passed	Passed	Passed	Passed	Passed	NA	Passed	Passed	Passed	NA	Passed	
Flash Point (°F)	<140°F		>200	>200	NA	>200	>200	>200	>200	>200	>200	NA	>200	>200	>200	NA	>200	
Reactivity <sup>3</sup>	None		Negative	Negative	NA	Negative	Negative	Negative	Negative	Negative	Negative	NA	Negative	Negative	Negative	NA	Negative	
Reactivity - Cyanide			<6	<6	NA	<5	<7	<6	<6	<6	<6	NA	<5	<6	<5	NA	<7	
Reactivity - Sulfide			<20	<20	NA	<20	<20	<20	<20	<20	<20	NA	<20	<20	<20	NA	<20	
DISPOSAL DESIGNATION			HAZARDOUS	UNLINED	UNLINED			LESS THAN RCS-1			LESS THAN RCS-1		UNLINED	LESS THAN RCS-1				
Detected Concentrations in <b>Bold Black</b> exceed the applicable MCP Soil S-1 Reportable Concentration																		
Detected Concentrations in <b>Bold Blue</b> exceed the Massachusetts Unlined Landfill Limit																		
Detected Concentrations in <b>Bold Red</b> exceed the Massachusetts Lined Landfill Limit																		
Detected Concentrations that are <u>Underlined</u> exceed the TCLP 20x Rule, necessitating TCLP analysis																		
ND = Not Detected (Laboratory detection limits in parentheses)																		
NA = Not Analyzed																		
NE = Not Established																		
CS = Compound-Specific Standards																		
mg/kg = Milligrams per kilogram																		
µmhos/cm = Micromhos per centimeter																		
* Number equals Toxicity Characteristic Leaching Procedure (TCLP) standard in mg/kg x 20, which if equaled or exceeded re																		
Calculated in accordance with 310 CMR 30.125 and USEPA Memorandum #36, Notes on RCRA Methods and QA Activities,																		
<sup>1</sup> Ignitability defined in 310 CMR 30.122; flashpoint limit is applicable to liquids.																		
<sup>2</sup> Corrosivity defined in 310 CMR 30.123																		
<sup>3</sup> Reactivity defined in 310 CMR 30.124																		



## **APPENDIX A:**

## **LIMITATIONS**



## **LIMITATIONS**

The above observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the observed nature and extent of subsurface conditions between the subsurface explorations that were performed become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon analytical data obtained from analysis of a specific number of soil samples, as well as screening of soil samples for volatile organics, and are contingent upon their validity. These data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used and other factors.

The purpose of this report was to assess the physical characteristics of the site located at 515 Somerville Avenue in Somerville, Massachusetts with regard to the release of hazardous material or oil, as defined in Massachusetts General Laws Chapter 21E and the Massachusetts Contingency Plan 310 CMR 40.0000. No attempt was made to check on the compliance of present or past owners of the site with federal, state, or local laws and regulations except as otherwise documented herein.

Laboratory analyses have been performed for specific constituents during the course of this site assessment, as described in the text.

This study and report have been prepared on behalf of and for the exclusive use of YEM Somerville Ave, LLC and the Massachusetts Department of Environmental Protection solely for use in an environmental evaluation of the site. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party nor used in whole or in part by any other party without prior written consent of McPhail Associates, LLC.



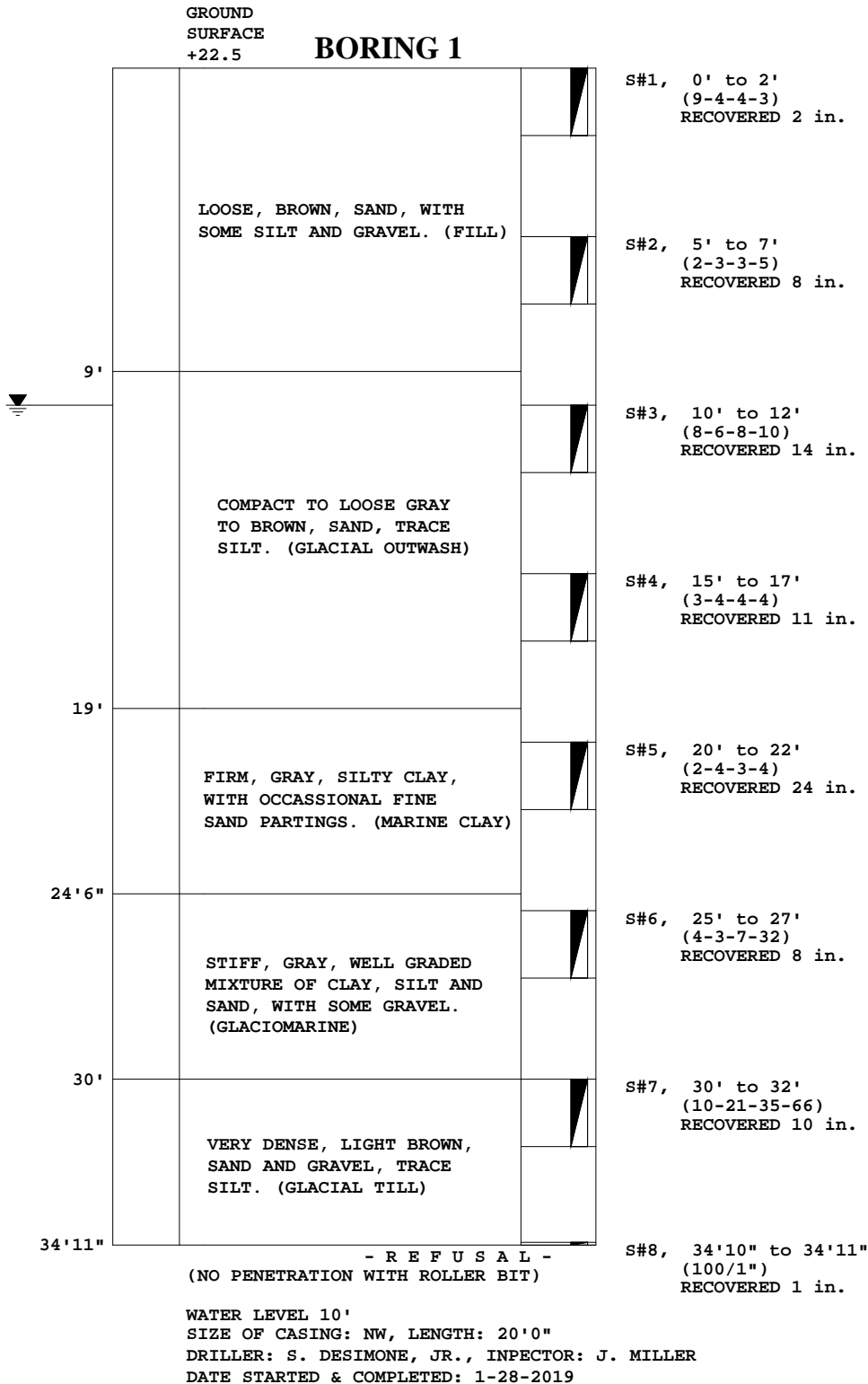
## **APPENDIX B:**

### **EXPLORATION LOG SHEETS PREPARED BY MCPHAIL ASSOCIATES**



# CARR-DEE CORP.

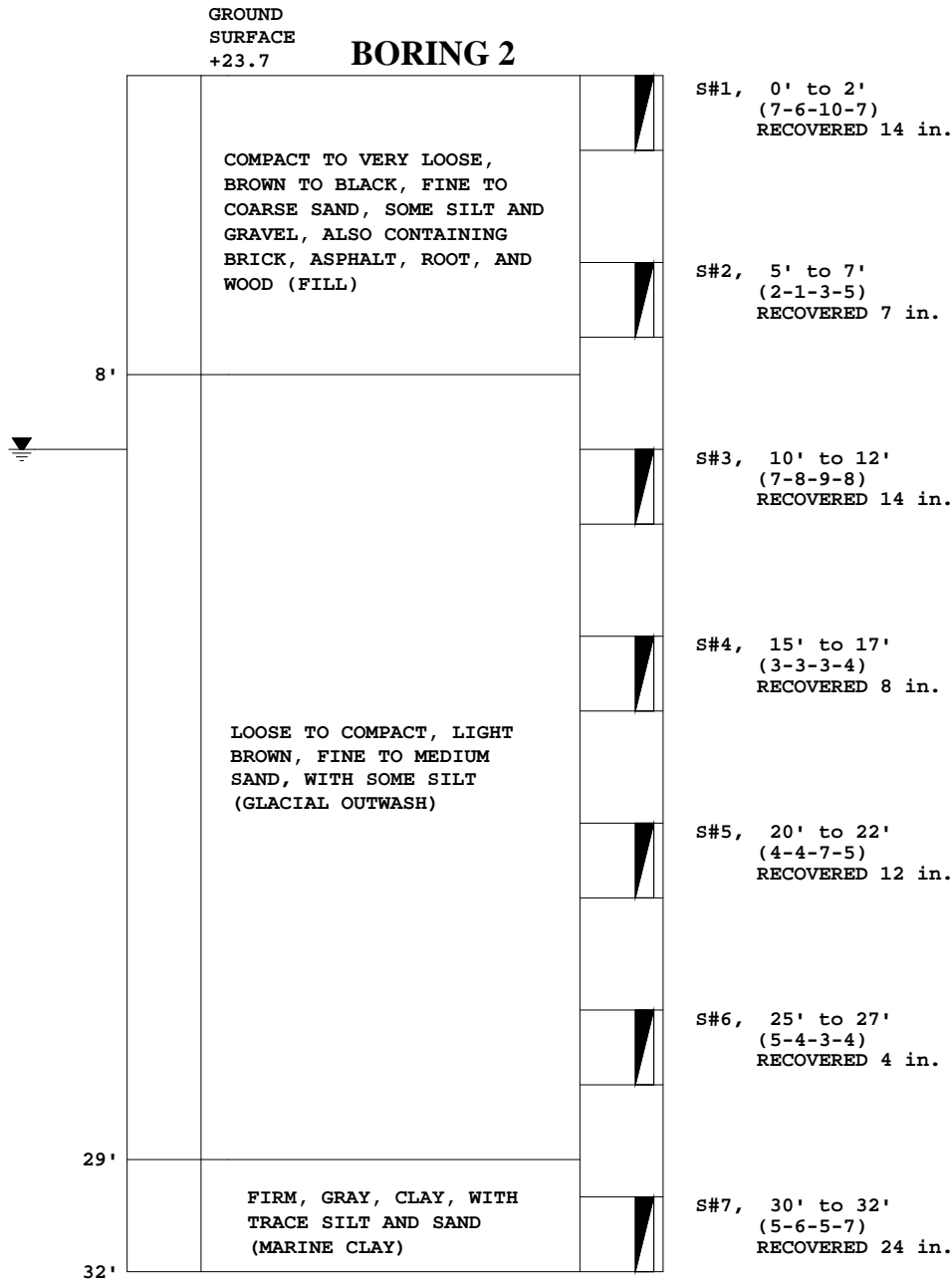
37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500  
 To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-30-2019 Job No.: 2019-17  
 Location: 515 SOMERVILLE AVENUE, SOMERVILLE, MA Scale: 1 in. = 5 ft.



All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

# CARR-DEE CORP.

37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500  
 To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-30-2019 Job No.: 2019-17  
 Location: 515 SOMERVILLE AVENUE, SOMERVILLE, MA Scale: 1 in. = 5 ft.

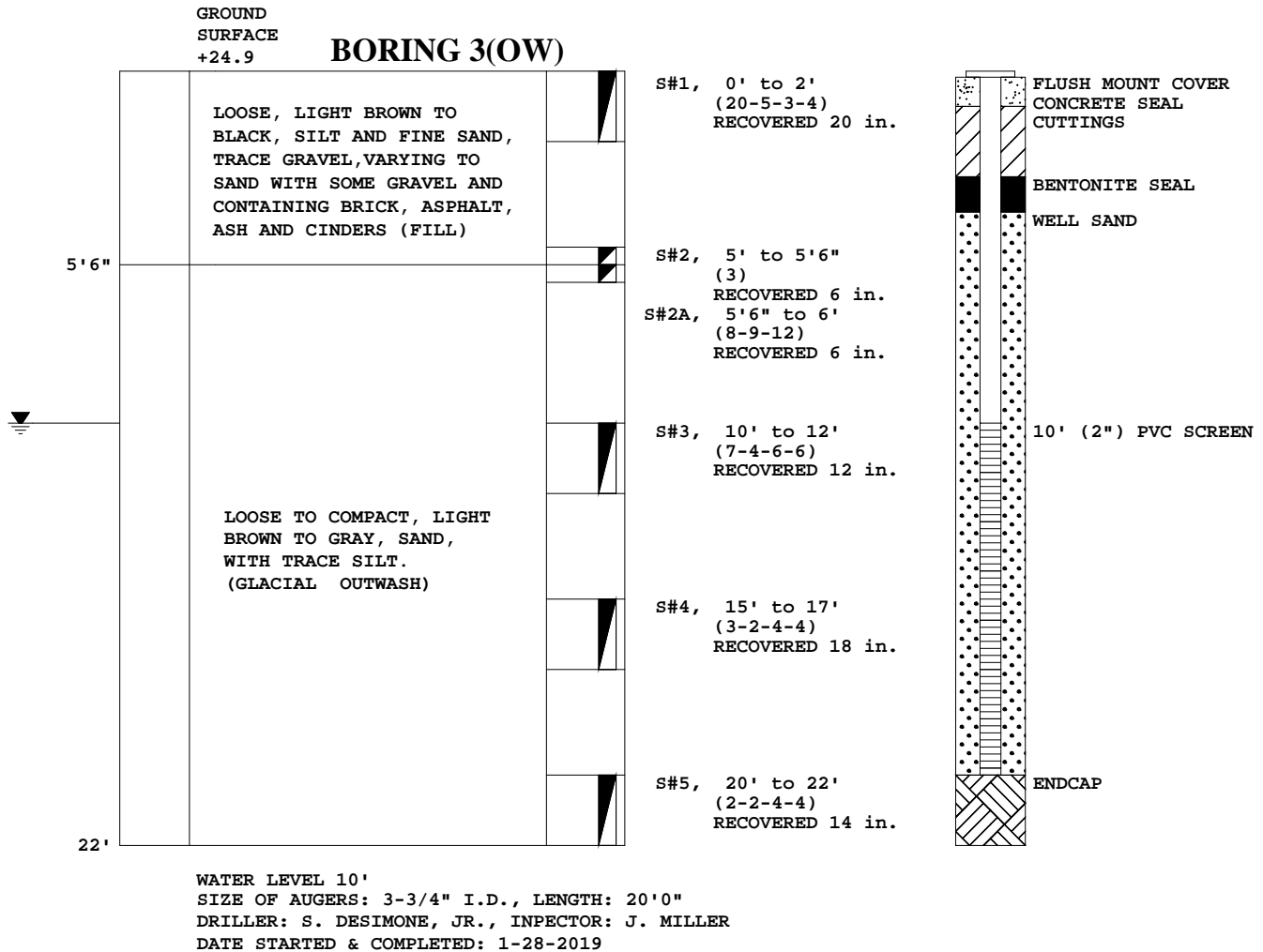


WATER LEVEL 10'  
 SIZE OF CASING: NW, LENGTH: 20'0"  
 DRILLER: S. DESIMONE, JR., INSPECTOR: J. MILLER  
 DATE STARTED & COMPLETED: 1-29-2019

All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

# CARR-DEE CORP.

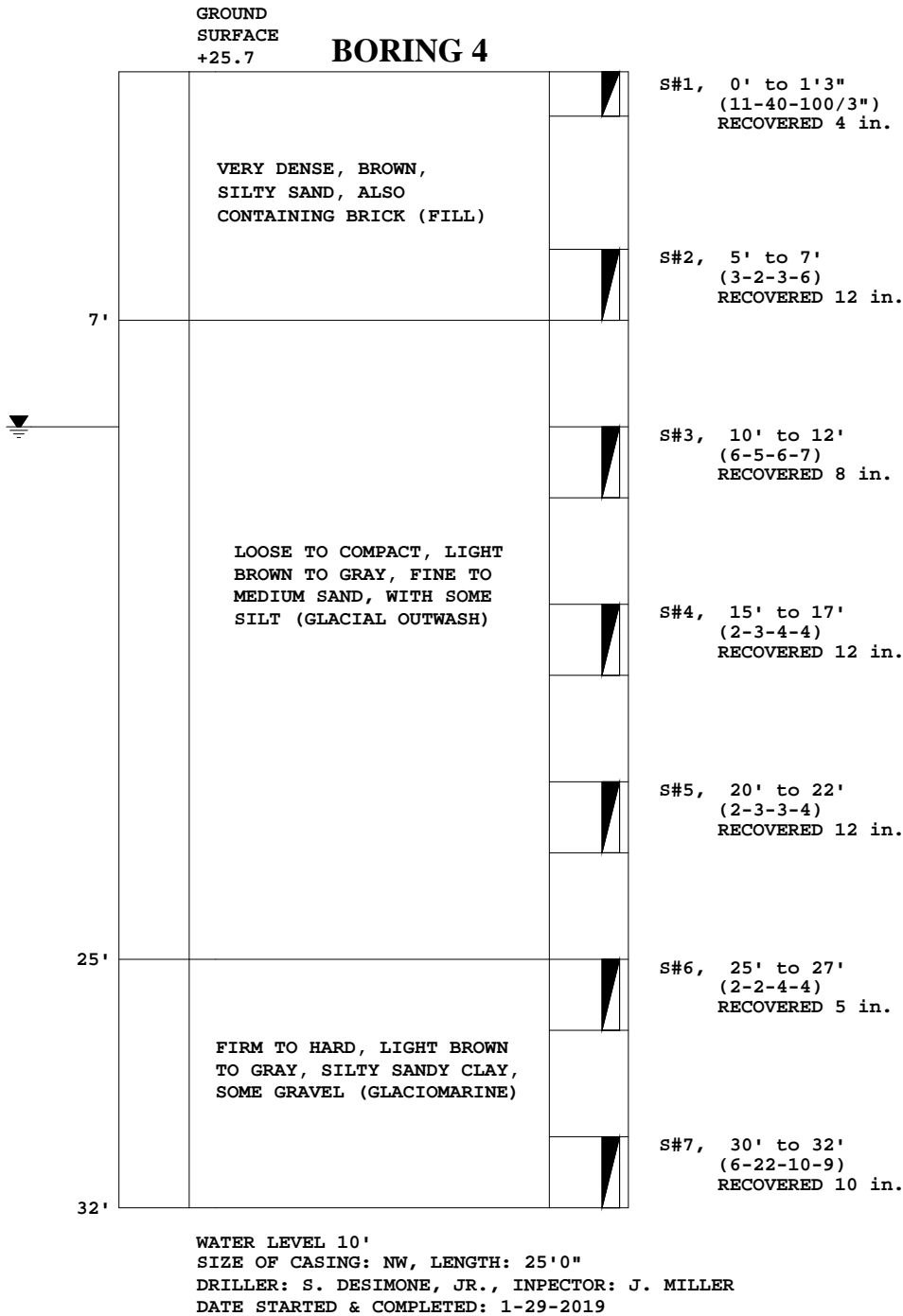
37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500  
 To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-30-2019 Job No.: 2019-17  
 Location: 515 SOMERVILLE AVENUE, SOMERVILLE, MA Scale: 1 in. = 5 ft.



All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

# CARR-DEE CORP.

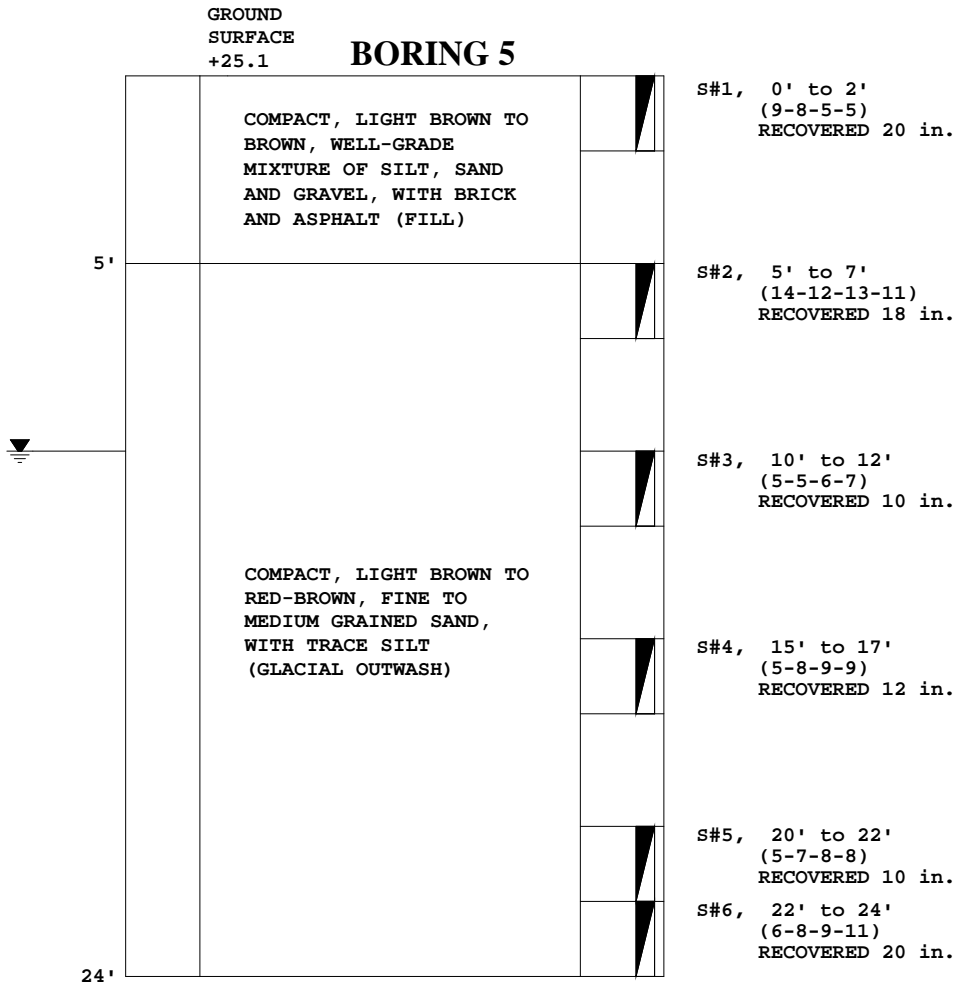
37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500  
 To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-30-2019 Job No.: 2019-17  
 Location: 515 SOMERVILLE AVENUE, SOMERVILLE, MA Scale: 1 in. = 5 ft.



All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).

# CARR-DEE CORP.

37 LINDEN STREET MEDFORD, MA 02155-0001 Telephone (781) 391-4500  
 To: MCPHAIL ASSOC., LLC, 2269 MASS. AVE., CAMBRIDGE, MA Date: 1-30-2019 Job No.: 2019-17  
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All samples have been visually classified by . Unless otherwise specified, water levels noted were observed at completion of borings, and do not necessarily represent permanent ground water levels. Figures in parenthesis indicate the number of blows required to drive Two-inch Split Sampler 6 inches using 140 lb. weight falling 30 inches(±). Figures in column to left (if noted) indicate number of blows to drive casing one foot, using 300 lb. weight falling 24 inches (±).



## **APPENDIX C:**

### **LABORATORY DATA REPORTS – SOIL (MCPHAIL)**



# ProScience Analytical Services, Inc

---

Melissa Gulli  
Alpha Analytical - Westborough  
Eight Walkup Drive  
Westborough, MA 01581

February 24, 2020

Dear Melissa Gulli,

The enclosed analytical results have been obtained using the EPA/600/R-93/116 method. Calibrated Visual Estimate (CVE) is used by ProScience for the determination of the percentage of asbestos and other components in the sample. The sample preparation technique used was in accordance with the US EPA office of Environmental Evaluation and Measurement - Region 1 requirements. This technique involves the elimination of interfering particles through the following steps: homogenization of the sample; separation of different fractions and examination under the stereomicroscope.

The quality control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client. As such, these results apply to the sample(s) as received.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested. This report may not be reproduced, except in its entirety, without the permission of ProScience Analytical Services, Inc., Laboratory Director.

If you have any questions please contact the Optical Manager or the Laboratory Director.

Sincerely,

A handwritten signature in black ink, appearing to read "Sophie Ken", is written over a horizontal line.

Sophetra Ken, Optical Asbestos Manager

Aimee Cormier, Laboratory Director

Enclosure:

LAB BATCH ID: S 120419 CLIENT PROJECT ID: L2007468

Client Ref: MA

CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; NVLAP Lab Code 200090-0; RI ID # AAL-093;

VT ID# AL016876



# ProScience Analytical Services, Inc.

Client #: 1497  
 Client Project: L2007468  
 Client Reference: MA  
 Client Name: Alpha Analytical - Westborough  
 Method: EPA/600/R-93/116; ENV.EVAL. and MEAS.- REGION 1 Requirements

**Batch: S 120419**  
 Date Sampled: 2/18/2020  
 Date Received: 2/20/2020  
 Date Analyzed: 2/24/2020  
 Date of Report: 2/24/2020

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
TP-1	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Soil Location: N/A Comments: Analyzed: Yes														

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
TP-2	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Soil Location: N/A Comments: Analyzed: Yes														

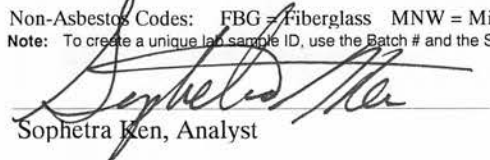
Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
TP-3	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Soil Location: N/A Comments: Analyzed: Yes														

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite

Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage

  
 Sophetra Ken, Analyst

**Client Name:** Alpha Analytical - Westborough

Client Project #: L2007468

Client Reference: MA

**Batch:** 5 **120419**

Date Received: 2/20/2020

Date Due: 2/24/2020

Stop on first pos: Yes or No

**Batch: 120419**

Batch: 120419			Stereo Scope					Optical Properties					RI		Asbestos Percent					Non-Asbestos Percent							
Sample ID	Description	Analyst	SSAPE	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Parallel	Perpendicular	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
TP-1	Soil	S.K.	✓	✓	✓	✓	✓																			100	
TP-2	Soil	S.K.	✓	✓	✓	✓	✓																			100	
TP-3	Soil	S.K.	✓	✓	✓	✓	✓																			100	

Analyzed By / Date:

*Signature*

QC By / Date:

*2/24/20*

Fax, (Email)

Verbal Results By / Date:


*H.W. mmv*  
*2/24/20*

# of Samples:

3

Comments:

*analyzed*  
*@ H.W. mmv*  
*2/24/20*

		<b>Subcontract Chain of Custody</b> ProScience Analytical Services 22 Cummings Park Woburn, MA 01801 <i>S120419</i>		<b>Alpha Job Number</b> L2007468	
<b>Client Information</b>		<b>Project Information</b>		<b>Regulatory Requirements/Report Limits</b>	
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019  Phone: 603.319.5010 Email: mgulli@alphalab.com		Project Location: MA Project Manager: Melissa Gulli  <b>Turnaround &amp; Deliverables Information</b> Due Date: 02/24/20 (RUSH) Deliverables:		State/Federal Program: Regulatory Criteria:	
<b>Project Specific Requirements and/or Report Requirements</b>					
Reference following Alpha Job Number on final report/deliverables: L2007468				Report to include Method Blank, LCS/LCSD:	
Additional Comments: Send all results/reports to subreports@alphalab.com					
Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	TP-1 TP-2 TP-3	02-18-20 14:00 02-18-20 14:00 02-18-20 14:00	Fill Fill Fill	Asbestos-PLM Asbestos-PLM Asbestos-PLM	
Relinquished By:		Date/Time:		Received By:	
<i>[Signature]</i>		2/20/20 0800		<i>[Signature]</i>	
<i>[Signature]</i>		2/20/20 1100		<i>[Signature]</i>	
<i>Rob Maceto Att 2/20/20</i>				<i>[Signature]</i>	
Form No: AL_subcoc					



## ANALYTICAL REPORT

Lab Number:	L2007468
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	CAMBRIA HOTEL
Project Number:	6735
Report Date:	02/25/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

---

Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2007468-01	TP-1	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-02	TP-2	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-03	TP-3	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-04	TP-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-05	TP-4, S-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-06	TP-5	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-07	TP-5, S-6	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-08	TP-6	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-09	TP-6, S-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-10	TP-9 3-6'	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-11	TP-7	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-12	TP-7, S-6	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/20/20
L2007468-13	TP-9 6-9'	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-14	TP-9A	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-15	TP-10	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007468-16	TP-10, S-6	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/20/20
L2007468-17	TP-11	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-18	TP-11, S-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007468-19	TP-9, S-3	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/20/20
L2007468-20	TP-8, S-6	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/20/20

Project Name: CAMBRIA HOTEL

Lab Number: L2007468

Project Number: 6735

Report Date: 02/25/20

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

---



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### Case Narrative (continued)

#### Report Submission

The analysis of Asbestos was subcontracted. A copy of the laboratory report is included as an addendum.  
Please note: This data is only available in PDF format and is not available on Data Merger.

#### MCP Related Narratives

##### Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Total Metals.

#### Volatile Organics

L2007468-12: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

L2007468-16: The analysis of Volatile Organics by EPA Method 5035/8260 Low Level could not be performed due to the elevated concentrations of non-target compounds in the sample.

The initial calibration, associated with L2007468-05, -07, -09, -12, -16, -18, and -20, utilized a quadratic fit for bromomethane.

In reference to question G:

L2007468-12 and -16: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L2007468-12 and -16: The surrogate recovery is outside the acceptance criteria for 4-bromofluorobenzene (279% and 146%, respectively); however, the sample was not re-analyzed due to coelution with an obvious interference. A copy of the chromatogram is included as an attachment to this report.

The initial calibration, associated with L2007468-05, -07, -09, -12, -16, -18, and -20, did not meet the method required minimum response factor on the lowest calibration standard for 4-methyl-2-pentanone (0.0945) and 1,4-dioxane (0.0014), as well as the average response factor for 4-methyl-2-pentanone and 1,4-dioxane.

The continuing calibration standards, associated with L2007468-05, -07, -09, -12, -16, -18, and -20, are

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### Case Narrative (continued)

outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

#### PAHs

In reference to question I:

L2007468-10 was analyzed for a subset of MCP analytes per client request.


#### Total Metals

In reference to question I:

All samples were analyzed for a subset of MCP analytes per client request.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 02/25/20

# QC OUTLIER SUMMARY REPORT

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics by EPA 5035 High - Westborough Lab								
8260C	TP-7, S-6	L2007468-12 D	4-Bromofluorobenzene	Surrogate	279	70-130	-	potential high bias
8260C	TP-10, S-6	L2007468-16	4-Bromofluorobenzene	Surrogate	146	70-130	-	potential high bias
Volatile Petroleum Hydrocarbons - Westborough Lab								
VPH-18-2.1	TP-8, S-6	L2007468-20	2,5-Dibromotoluene-PID	Surrogate	156	70-130	-	potential high bias
VPH-18-2.1	TP-8, S-6	L2007468-20	2,5-Dibromotoluene-FID	Surrogate	146	70-130	-	potential high bias
MCP Polychlorinated Biphenyls - Westborough Lab								
8082A	Batch QC	WG1342785-3	Aroclor 1016 (A)	LCSD	42	30	04,06,08,11, 13-15,17	non-directional bias
8082A	Batch QC	WG1342785-3	Aroclor 1260 (A)	LCSD	40	30	04,06,08,11, 13-15,17	non-directional bias

# ORGANICS

# **VOLATILES**

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-05  
 Client ID: TP-4, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-8  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 09:42  
 Analyst: JC  
 Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.7	--	1
1,1-Dichloroethane	ND		ug/kg	0.95	--	1
Chloroform	ND		ug/kg	1.4	--	1
Carbon tetrachloride	ND		ug/kg	0.95	--	1
1,2-Dichloropropane	ND		ug/kg	0.95	--	1
Dibromochloromethane	ND		ug/kg	0.95	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.95	--	1
Tetrachloroethene	ND		ug/kg	0.47	--	1
Chlorobenzene	ND		ug/kg	0.47	--	1
Trichlorofluoromethane	ND		ug/kg	3.8	--	1
1,2-Dichloroethane	ND		ug/kg	0.95	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.47	--	1
Bromodichloromethane	ND		ug/kg	0.47	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.95	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.47	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.47	--	1
1,1-Dichloropropene	ND		ug/kg	0.47	--	1
Bromoform	ND		ug/kg	3.8	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.47	--	1
Benzene	ND		ug/kg	0.47	--	1
Toluene	ND		ug/kg	0.95	--	1
Ethylbenzene	ND		ug/kg	0.95	--	1
Chloromethane	ND		ug/kg	3.8	--	1
Bromomethane	ND		ug/kg	1.9	--	1
Vinyl chloride	ND		ug/kg	0.95	--	1
Chloroethane	ND		ug/kg	1.9	--	1
1,1-Dichloroethene	ND		ug/kg	0.95	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	--	1

Project Name: CAMBRIA HOTEL

Lab Number: L2007468

Project Number: 6735

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-05  
 Client ID: TP-4, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-8

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.47	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.9	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	--	1
Methyl tert butyl ether	ND		ug/kg	1.9	--	1
p/m-Xylene	ND		ug/kg	1.9	--	1
o-Xylene	ND		ug/kg	0.95	--	1
Xylenes, Total	ND		ug/kg	0.95	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.95	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.95	--	1
Dibromomethane	ND		ug/kg	1.9	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.9	--	1
Styrene	ND		ug/kg	0.95	--	1
Dichlorodifluoromethane	ND		ug/kg	9.5	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	9.5	--	1
Methyl ethyl ketone	ND		ug/kg	9.5	--	1
Methyl isobutyl ketone	ND		ug/kg	9.5	--	1
2-Hexanone	ND		ug/kg	9.5	--	1
Bromochloromethane	ND		ug/kg	1.9	--	1
Tetrahydrofuran	ND		ug/kg	3.8	--	1
2,2-Dichloropropane	ND		ug/kg	1.9	--	1
1,2-Dibromoethane	ND		ug/kg	0.95	--	1
1,3-Dichloropropane	ND		ug/kg	1.9	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.47	--	1
Bromobenzene	ND		ug/kg	1.9	--	1
n-Butylbenzene	ND		ug/kg	0.95	--	1
sec-Butylbenzene	ND		ug/kg	0.95	--	1
tert-Butylbenzene	ND		ug/kg	1.9	--	1
o-Chlorotoluene	ND		ug/kg	1.9	--	1
p-Chlorotoluene	ND		ug/kg	1.9	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.8	--	1
Hexachlorobutadiene	ND		ug/kg	3.8	--	1
Isopropylbenzene	ND		ug/kg	0.95	--	1
p-Isopropyltoluene	ND		ug/kg	0.95	--	1
Naphthalene	ND		ug/kg	3.8	--	1
n-Propylbenzene	ND		ug/kg	0.95	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-05**Date Collected:** 02/18/20 14:00**Client ID:** TP-4, S-4**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-8

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	--	1
Diethyl ether	ND		ug/kg	1.9	--	1
Diisopropyl Ether	ND		ug/kg	1.9	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.9	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.9	--	1
1,4-Dioxane	ND		ug/kg	76	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-07  
 Client ID: TP-5, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 10-12  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 10:11  
 Analyst: JC  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.7	--	1
1,1-Dichloroethane	ND		ug/kg	0.93	--	1
Chloroform	ND		ug/kg	1.4	--	1
Carbon tetrachloride	ND		ug/kg	0.93	--	1
1,2-Dichloropropane	ND		ug/kg	0.93	--	1
Dibromochloromethane	ND		ug/kg	0.93	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.93	--	1
Tetrachloroethene	ND		ug/kg	0.47	--	1
Chlorobenzene	ND		ug/kg	0.47	--	1
Trichlorofluoromethane	ND		ug/kg	3.7	--	1
1,2-Dichloroethane	ND		ug/kg	0.93	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.47	--	1
Bromodichloromethane	ND		ug/kg	0.47	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.93	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.47	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.47	--	1
1,1-Dichloropropene	ND		ug/kg	0.47	--	1
Bromoform	ND		ug/kg	3.7	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.47	--	1
Benzene	ND		ug/kg	0.47	--	1
Toluene	ND		ug/kg	0.93	--	1
Ethylbenzene	ND		ug/kg	0.93	--	1
Chloromethane	ND		ug/kg	3.7	--	1
Bromomethane	ND		ug/kg	1.9	--	1
Vinyl chloride	ND		ug/kg	0.93	--	1
Chloroethane	ND		ug/kg	1.9	--	1
1,1-Dichloroethene	ND		ug/kg	0.93	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-07  
 Client ID: TP-5, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.47	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.9	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	--	1
Methyl tert butyl ether	ND		ug/kg	1.9	--	1
p/m-Xylene	ND		ug/kg	1.9	--	1
o-Xylene	ND		ug/kg	0.93	--	1
Xylenes, Total	ND		ug/kg	0.93	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.93	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.93	--	1
Dibromomethane	ND		ug/kg	1.9	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.9	--	1
Styrene	ND		ug/kg	0.93	--	1
Dichlorodifluoromethane	ND		ug/kg	9.3	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	9.3	--	1
Methyl ethyl ketone	ND		ug/kg	9.3	--	1
Methyl isobutyl ketone	ND		ug/kg	9.3	--	1
2-Hexanone	ND		ug/kg	9.3	--	1
Bromochloromethane	ND		ug/kg	1.9	--	1
Tetrahydrofuran	ND		ug/kg	3.7	--	1
2,2-Dichloropropane	ND		ug/kg	1.9	--	1
1,2-Dibromoethane	ND		ug/kg	0.93	--	1
1,3-Dichloropropane	ND		ug/kg	1.9	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.47	--	1
Bromobenzene	ND		ug/kg	1.9	--	1
n-Butylbenzene	ND		ug/kg	0.93	--	1
sec-Butylbenzene	ND		ug/kg	0.93	--	1
tert-Butylbenzene	ND		ug/kg	1.9	--	1
o-Chlorotoluene	ND		ug/kg	1.9	--	1
p-Chlorotoluene	ND		ug/kg	1.9	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.8	--	1
Hexachlorobutadiene	ND		ug/kg	3.7	--	1
Isopropylbenzene	ND		ug/kg	0.93	--	1
p-Isopropyltoluene	ND		ug/kg	0.93	--	1
Naphthalene	ND		ug/kg	3.7	--	1
n-Propylbenzene	ND		ug/kg	0.93	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-07**Date Collected:** 02/19/20 14:00**Client ID:** TP-5, S-6**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	--	1
Diethyl ether	ND		ug/kg	1.9	--	1
Diisopropyl Ether	ND		ug/kg	1.9	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.9	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.9	--	1
1,4-Dioxane	ND		ug/kg	75	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	100		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-09  
 Client ID: TP-6, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-8  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 10:41  
 Analyst: JC  
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.5	--	1
1,1-Dichloroethane	ND		ug/kg	1.1	--	1
Chloroform	ND		ug/kg	1.6	--	1
Carbon tetrachloride	ND		ug/kg	1.1	--	1
1,2-Dichloropropane	ND		ug/kg	1.1	--	1
Dibromochloromethane	ND		ug/kg	1.1	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	--	1
Tetrachloroethene	ND		ug/kg	0.55	--	1
Chlorobenzene	ND		ug/kg	0.55	--	1
Trichlorofluoromethane	ND		ug/kg	4.4	--	1
1,2-Dichloroethane	ND		ug/kg	1.1	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.55	--	1
Bromodichloromethane	ND		ug/kg	0.55	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.55	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.55	--	1
1,1-Dichloropropene	ND		ug/kg	0.55	--	1
Bromoform	ND		ug/kg	4.4	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.55	--	1
Benzene	ND		ug/kg	0.55	--	1
Toluene	ND		ug/kg	1.1	--	1
Ethylbenzene	ND		ug/kg	1.1	--	1
Chloromethane	ND		ug/kg	4.4	--	1
Bromomethane	ND		ug/kg	2.2	--	1
Vinyl chloride	ND		ug/kg	1.1	--	1
Chloroethane	ND		ug/kg	2.2	--	1
1,1-Dichloroethene	ND		ug/kg	1.1	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-09**Date Collected:** 02/19/20 14:00**Client ID:** TP-6, S-4**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-8

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.55	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.2	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.2	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.2	--	1
Methyl tert butyl ether	ND		ug/kg	2.2	--	1
p/m-Xylene	ND		ug/kg	2.2	--	1
o-Xylene	ND		ug/kg	1.1	--	1
Xylenes, Total	ND		ug/kg	1.1	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	--	1
Dibromomethane	ND		ug/kg	2.2	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.2	--	1
Styrene	ND		ug/kg	1.1	--	1
Dichlorodifluoromethane	ND		ug/kg	11	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	11	--	1
Methyl ethyl ketone	ND		ug/kg	11	--	1
Methyl isobutyl ketone	ND		ug/kg	11	--	1
2-Hexanone	ND		ug/kg	11	--	1
Bromochloromethane	ND		ug/kg	2.2	--	1
Tetrahydrofuran	ND		ug/kg	4.4	--	1
2,2-Dichloropropane	ND		ug/kg	2.2	--	1
1,2-Dibromoethane	ND		ug/kg	1.1	--	1
1,3-Dichloropropane	ND		ug/kg	2.2	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.55	--	1
Bromobenzene	ND		ug/kg	2.2	--	1
n-Butylbenzene	ND		ug/kg	1.1	--	1
sec-Butylbenzene	ND		ug/kg	1.1	--	1
tert-Butylbenzene	ND		ug/kg	2.2	--	1
o-Chlorotoluene	ND		ug/kg	2.2	--	1
p-Chlorotoluene	ND		ug/kg	2.2	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.3	--	1
Hexachlorobutadiene	ND		ug/kg	4.4	--	1
Isopropylbenzene	ND		ug/kg	1.1	--	1
p-Isopropyltoluene	ND		ug/kg	1.1	--	1
Naphthalene	ND		ug/kg	4.4	--	1
n-Propylbenzene	ND		ug/kg	1.1	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-09**Date Collected:** 02/19/20 14:00**Client ID:** TP-6, S-4**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-8

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.2	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.2	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.2	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.2	--	1
Diethyl ether	ND		ug/kg	2.2	--	1
Diisopropyl Ether	ND		ug/kg	2.2	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.2	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.2	--	1
1,4-Dioxane	ND		ug/kg	88	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	99		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-12 D  
 Client ID: TP-7, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 17:29  
 Analyst: MKS  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	3800	--	10
1,1-Dichloroethane	ND		ug/kg	770	--	10
Chloroform	ND		ug/kg	1200	--	10
Carbon tetrachloride	ND		ug/kg	770	--	10
1,2-Dichloropropane	ND		ug/kg	770	--	10
Dibromochloromethane	ND		ug/kg	770	--	10
1,1,2-Trichloroethane	ND		ug/kg	770	--	10
Tetrachloroethene	ND		ug/kg	380	--	10
Chlorobenzene	ND		ug/kg	380	--	10
Trichlorofluoromethane	ND		ug/kg	3100	--	10
1,2-Dichloroethane	ND		ug/kg	770	--	10
1,1,1-Trichloroethane	ND		ug/kg	380	--	10
Bromodichloromethane	ND		ug/kg	380	--	10
trans-1,3-Dichloropropene	ND		ug/kg	770	--	10
cis-1,3-Dichloropropene	ND		ug/kg	380	--	10
1,3-Dichloropropene, Total	ND		ug/kg	380	--	10
1,1-Dichloropropene	ND		ug/kg	380	--	10
Bromoform	ND		ug/kg	3100	--	10
1,1,2,2-Tetrachloroethane	ND		ug/kg	380	--	10
Benzene	ND		ug/kg	380	--	10
Toluene	ND		ug/kg	770	--	10
Ethylbenzene	ND		ug/kg	770	--	10
Chloromethane	ND		ug/kg	3100	--	10
Bromomethane	ND		ug/kg	1500	--	10
Vinyl chloride	ND		ug/kg	770	--	10
Chloroethane	ND		ug/kg	1500	--	10
1,1-Dichloroethene	ND		ug/kg	770	--	10
trans-1,2-Dichloroethene	ND		ug/kg	1200	--	10

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-12 D  
 Client ID: TP-7, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	ND		ug/kg	380	--	10
1,2-Dichlorobenzene	ND		ug/kg	1500	--	10
1,3-Dichlorobenzene	ND		ug/kg	1500	--	10
1,4-Dichlorobenzene	ND		ug/kg	1500	--	10
Methyl tert butyl ether	ND		ug/kg	1500	--	10
p/m-Xylene	ND		ug/kg	1500	--	10
o-Xylene	ND		ug/kg	770	--	10
Xylenes, Total	ND		ug/kg	770	--	10
cis-1,2-Dichloroethene	ND		ug/kg	770	--	10
1,2-Dichloroethene, Total	ND		ug/kg	770	--	10
Dibromomethane	ND		ug/kg	1500	--	10
1,2,3-Trichloropropane	ND		ug/kg	1500	--	10
Styrene	ND		ug/kg	770	--	10
Dichlorodifluoromethane	ND		ug/kg	7700	--	10
Acetone	ND		ug/kg	7700	--	10
Carbon disulfide	ND		ug/kg	7700	--	10
Methyl ethyl ketone	ND		ug/kg	7700	--	10
Methyl isobutyl ketone	ND		ug/kg	7700	--	10
2-Hexanone	ND		ug/kg	7700	--	10
Bromochloromethane	ND		ug/kg	1500	--	10
Tetrahydrofuran	ND		ug/kg	3100	--	10
2,2-Dichloropropane	ND		ug/kg	1500	--	10
1,2-Dibromoethane	ND		ug/kg	770	--	10
1,3-Dichloropropane	ND		ug/kg	1500	--	10
1,1,1,2-Tetrachloroethane	ND		ug/kg	380	--	10
Bromobenzene	ND		ug/kg	1500	--	10
n-Butylbenzene	40000		ug/kg	770	--	10
sec-Butylbenzene	41000		ug/kg	770	--	10
tert-Butylbenzene	4700		ug/kg	1500	--	10
o-Chlorotoluene	ND		ug/kg	1500	--	10
p-Chlorotoluene	ND		ug/kg	1500	--	10
1,2-Dibromo-3-chloropropane	ND		ug/kg	2300	--	10
Hexachlorobutadiene	ND		ug/kg	3100	--	10
Isopropylbenzene	15000		ug/kg	770	--	10
p-Isopropyltoluene	ND		ug/kg	770	--	10
Naphthalene	ND		ug/kg	3100	--	10
n-Propylbenzene	45000		ug/kg	770	--	10



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-12 D

Date Collected: 02/18/20 14:00

Client ID: TP-7, S-6

Date Received: 02/20/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 High - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	1500	--	10
1,2,4-Trichlorobenzene	ND		ug/kg	1500	--	10
1,3,5-Trimethylbenzene	ND		ug/kg	1500	--	10
1,2,4-Trimethylbenzene	ND		ug/kg	1500	--	10
Diethyl ether	ND		ug/kg	1500	--	10
Diisopropyl Ether	ND		ug/kg	1500	--	10
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1500	--	10
Tertiary-Amyl Methyl Ether	ND		ug/kg	1500	--	10
1,4-Dioxane	ND		ug/kg	61000	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	279	Q	70-130
Dibromofluoromethane	101		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-16  
 Client ID: TP-10, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 08:38  
 Analyst: JC  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	350	--	1
1,1-Dichloroethane	ND		ug/kg	71	--	1
Chloroform	ND		ug/kg	110	--	1
Carbon tetrachloride	ND		ug/kg	71	--	1
1,2-Dichloropropane	ND		ug/kg	71	--	1
Dibromochloromethane	ND		ug/kg	71	--	1
1,1,2-Trichloroethane	ND		ug/kg	71	--	1
Tetrachloroethene	ND		ug/kg	35	--	1
Chlorobenzene	ND		ug/kg	35	--	1
Trichlorofluoromethane	ND		ug/kg	280	--	1
1,2-Dichloroethane	ND		ug/kg	71	--	1
1,1,1-Trichloroethane	ND		ug/kg	35	--	1
Bromodichloromethane	ND		ug/kg	35	--	1
trans-1,3-Dichloropropene	ND		ug/kg	71	--	1
cis-1,3-Dichloropropene	ND		ug/kg	35	--	1
1,3-Dichloropropene, Total	ND		ug/kg	35	--	1
1,1-Dichloropropene	ND		ug/kg	35	--	1
Bromoform	ND		ug/kg	280	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	35	--	1
Benzene	ND		ug/kg	35	--	1
Toluene	ND		ug/kg	71	--	1
Ethylbenzene	ND		ug/kg	71	--	1
Chloromethane	ND		ug/kg	280	--	1
Bromomethane	ND		ug/kg	140	--	1
Vinyl chloride	ND		ug/kg	71	--	1
Chloroethane	ND		ug/kg	140	--	1
1,1-Dichloroethene	ND		ug/kg	71	--	1
trans-1,2-Dichloroethene	ND		ug/kg	110	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-16  
 Client ID: TP-10, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	ND		ug/kg	35	--	1
1,2-Dichlorobenzene	ND		ug/kg	140	--	1
1,3-Dichlorobenzene	ND		ug/kg	140	--	1
1,4-Dichlorobenzene	ND		ug/kg	140	--	1
Methyl tert butyl ether	ND		ug/kg	140	--	1
p/m-Xylene	ND		ug/kg	140	--	1
o-Xylene	ND		ug/kg	71	--	1
Xylenes, Total	ND		ug/kg	71	--	1
cis-1,2-Dichloroethene	ND		ug/kg	71	--	1
1,2-Dichloroethene, Total	ND		ug/kg	71	--	1
Dibromomethane	ND		ug/kg	140	--	1
1,2,3-Trichloropropane	ND		ug/kg	140	--	1
Styrene	ND		ug/kg	71	--	1
Dichlorodifluoromethane	ND		ug/kg	710	--	1
Acetone	ND		ug/kg	710	--	1
Carbon disulfide	ND		ug/kg	710	--	1
Methyl ethyl ketone	ND		ug/kg	710	--	1
Methyl isobutyl ketone	ND		ug/kg	710	--	1
2-Hexanone	ND		ug/kg	710	--	1
Bromochloromethane	ND		ug/kg	140	--	1
Tetrahydrofuran	ND		ug/kg	280	--	1
2,2-Dichloropropane	ND		ug/kg	140	--	1
1,2-Dibromoethane	ND		ug/kg	71	--	1
1,3-Dichloropropane	ND		ug/kg	140	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	35	--	1
Bromobenzene	ND		ug/kg	140	--	1
n-Butylbenzene	140		ug/kg	71	--	1
sec-Butylbenzene	120		ug/kg	71	--	1
tert-Butylbenzene	ND		ug/kg	140	--	1
o-Chlorotoluene	ND		ug/kg	140	--	1
p-Chlorotoluene	ND		ug/kg	140	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	210	--	1
Hexachlorobutadiene	ND		ug/kg	280	--	1
Isopropylbenzene	ND		ug/kg	71	--	1
p-Isopropyltoluene	ND		ug/kg	71	--	1
Naphthalene	ND		ug/kg	280	--	1
n-Propylbenzene	ND		ug/kg	71	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-16

Date Collected: 02/18/20 14:00

Client ID: TP-10, S-6

Date Received: 02/20/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 High - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	140	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	140	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	140	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	140	--	1
Diethyl ether	ND		ug/kg	140	--	1
Diisopropyl Ether	ND		ug/kg	140	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	140	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	140	--	1
1,4-Dioxane	ND		ug/kg	5700	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	146	Q	70-130
Dibromofluoromethane	98		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-18  
 Client ID: TP-11, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-8  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 11:10  
 Analyst: JC  
 Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.4	--	1
1,1-Dichloroethane	ND		ug/kg	0.89	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.89	--	1
1,2-Dichloropropane	ND		ug/kg	0.89	--	1
Dibromochloromethane	ND		ug/kg	0.89	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.89	--	1
Tetrachloroethene	ND		ug/kg	0.44	--	1
Chlorobenzene	ND		ug/kg	0.44	--	1
Trichlorofluoromethane	ND		ug/kg	3.6	--	1
1,2-Dichloroethane	ND		ug/kg	0.89	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.44	--	1
Bromodichloromethane	ND		ug/kg	0.44	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.89	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.44	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.44	--	1
1,1-Dichloropropene	ND		ug/kg	0.44	--	1
Bromoform	ND		ug/kg	3.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.44	--	1
Benzene	ND		ug/kg	0.44	--	1
Toluene	ND		ug/kg	0.89	--	1
Ethylbenzene	ND		ug/kg	0.89	--	1
Chloromethane	ND		ug/kg	3.6	--	1
Bromomethane	ND		ug/kg	1.8	--	1
Vinyl chloride	ND		ug/kg	0.89	--	1
Chloroethane	ND		ug/kg	1.8	--	1
1,1-Dichloroethene	ND		ug/kg	0.89	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-18  
 Client ID: TP-11, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-8

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.44	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.8	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.8	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.8	--	1
Methyl tert butyl ether	ND		ug/kg	1.8	--	1
p/m-Xylene	ND		ug/kg	1.8	--	1
o-Xylene	ND		ug/kg	0.89	--	1
Xylenes, Total	ND		ug/kg	0.89	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.89	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.89	--	1
Dibromomethane	ND		ug/kg	1.8	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.8	--	1
Styrene	ND		ug/kg	0.89	--	1
Dichlorodifluoromethane	ND		ug/kg	8.9	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	8.9	--	1
Methyl ethyl ketone	ND		ug/kg	8.9	--	1
Methyl isobutyl ketone	ND		ug/kg	8.9	--	1
2-Hexanone	ND		ug/kg	8.9	--	1
Bromochloromethane	ND		ug/kg	1.8	--	1
Tetrahydrofuran	ND		ug/kg	3.6	--	1
2,2-Dichloropropane	ND		ug/kg	1.8	--	1
1,2-Dibromoethane	ND		ug/kg	0.89	--	1
1,3-Dichloropropane	ND		ug/kg	1.8	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.44	--	1
Bromobenzene	ND		ug/kg	1.8	--	1
n-Butylbenzene	ND		ug/kg	0.89	--	1
sec-Butylbenzene	ND		ug/kg	0.89	--	1
tert-Butylbenzene	ND		ug/kg	1.8	--	1
o-Chlorotoluene	ND		ug/kg	1.8	--	1
p-Chlorotoluene	ND		ug/kg	1.8	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.7	--	1
Hexachlorobutadiene	ND		ug/kg	3.6	--	1
Isopropylbenzene	ND		ug/kg	0.89	--	1
p-Isopropyltoluene	ND		ug/kg	0.89	--	1
Naphthalene	ND		ug/kg	3.6	--	1
n-Propylbenzene	ND		ug/kg	0.89	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-18**Date Collected:** 02/19/20 14:00**Client ID:** TP-11, S-4**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-8

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	1.8	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.8	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.8	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.8	--	1
Diethyl ether	ND		ug/kg	1.8	--	1
Diisopropyl Ether	ND		ug/kg	1.8	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.8	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.8	--	1
1,4-Dioxane	ND		ug/kg	71	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	101		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-20  
 Client ID: TP-8, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 09:11  
 Analyst: JC  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.9	--	1
1,1-Dichloroethane	ND		ug/kg	1.2	--	1
Chloroform	ND		ug/kg	1.8	--	1
Carbon tetrachloride	ND		ug/kg	1.2	--	1
1,2-Dichloropropane	ND		ug/kg	1.2	--	1
Dibromochloromethane	ND		ug/kg	1.2	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	--	1
Tetrachloroethene	ND		ug/kg	0.59	--	1
Chlorobenzene	ND		ug/kg	0.59	--	1
Trichlorofluoromethane	ND		ug/kg	4.7	--	1
1,2-Dichloroethane	ND		ug/kg	1.2	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.59	--	1
Bromodichloromethane	ND		ug/kg	0.59	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.59	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.59	--	1
1,1-Dichloropropene	ND		ug/kg	0.59	--	1
Bromoform	ND		ug/kg	4.7	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.59	--	1
Benzene	ND		ug/kg	0.59	--	1
Toluene	ND		ug/kg	1.2	--	1
Ethylbenzene	ND		ug/kg	1.2	--	1
Chloromethane	ND		ug/kg	4.7	--	1
Bromomethane	ND		ug/kg	2.3	--	1
Vinyl chloride	ND		ug/kg	1.2	--	1
Chloroethane	ND		ug/kg	2.3	--	1
1,1-Dichloroethene	ND		ug/kg	1.2	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	--	1



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-20  
 Client ID: TP-8, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.59	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	--	1
Methyl tert butyl ether	ND		ug/kg	2.3	--	1
p/m-Xylene	ND		ug/kg	2.3	--	1
o-Xylene	ND		ug/kg	1.2	--	1
Xylenes, Total	ND		ug/kg	1.2	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	--	1
Dibromomethane	ND		ug/kg	2.3	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.3	--	1
Styrene	ND		ug/kg	1.2	--	1
Dichlorodifluoromethane	ND		ug/kg	12	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	12	--	1
Methyl ethyl ketone	ND		ug/kg	12	--	1
Methyl isobutyl ketone	ND		ug/kg	12	--	1
2-Hexanone	ND		ug/kg	12	--	1
Bromochloromethane	ND		ug/kg	2.3	--	1
Tetrahydrofuran	ND		ug/kg	4.7	--	1
2,2-Dichloropropane	ND		ug/kg	2.3	--	1
1,2-Dibromoethane	ND		ug/kg	1.2	--	1
1,3-Dichloropropane	ND		ug/kg	2.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.59	--	1
Bromobenzene	ND		ug/kg	2.3	--	1
n-Butylbenzene	ND		ug/kg	1.2	--	1
sec-Butylbenzene	ND		ug/kg	1.2	--	1
tert-Butylbenzene	ND		ug/kg	2.3	--	1
o-Chlorotoluene	ND		ug/kg	2.3	--	1
p-Chlorotoluene	ND		ug/kg	2.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	--	1
Hexachlorobutadiene	ND		ug/kg	4.7	--	1
Isopropylbenzene	ND		ug/kg	1.2	--	1
p-Isopropyltoluene	ND		ug/kg	1.2	--	1
Naphthalene	ND		ug/kg	4.7	--	1
n-Propylbenzene	ND		ug/kg	1.2	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-20**Date Collected:** 02/18/20 14:00**Client ID:** TP-8, S-6**Date Received:** 02/20/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 10-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.3	--	1
Diethyl ether	ND		ug/kg	2.3	--	1
Diisopropyl Ether	ND		ug/kg	2.3	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.3	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.3	--	1
1,4-Dioxane	ND		ug/kg	94	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	98		70-130

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 07:32  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 12,16 Batch: WG1343218-5					
Methylene chloride	ND		ug/kg	250	--
1,1-Dichloroethane	ND		ug/kg	50	--
Chloroform	ND		ug/kg	75	--
Carbon tetrachloride	ND		ug/kg	50	--
1,2-Dichloropropane	ND		ug/kg	50	--
Dibromochloromethane	ND		ug/kg	50	--
1,1,2-Trichloroethane	ND		ug/kg	50	--
Tetrachloroethene	ND		ug/kg	25	--
Chlorobenzene	ND		ug/kg	25	--
Trichlorofluoromethane	ND		ug/kg	200	--
1,2-Dichloroethane	ND		ug/kg	50	--
1,1,1-Trichloroethane	ND		ug/kg	25	--
Bromodichloromethane	ND		ug/kg	25	--
trans-1,3-Dichloropropene	ND		ug/kg	50	--
cis-1,3-Dichloropropene	ND		ug/kg	25	--
1,3-Dichloropropene, Total	ND		ug/kg	25	--
1,1-Dichloropropene	ND		ug/kg	25	--
Bromoform	ND		ug/kg	200	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	--
Benzene	ND		ug/kg	25	--
Toluene	ND		ug/kg	50	--
Ethylbenzene	ND		ug/kg	50	--
Chloromethane	ND		ug/kg	200	--
Bromomethane	ND		ug/kg	100	--
Vinyl chloride	ND		ug/kg	50	--
Chloroethane	ND		ug/kg	100	--
1,1-Dichloroethene	ND		ug/kg	50	--
trans-1,2-Dichloroethene	ND		ug/kg	75	--
Trichloroethene	ND		ug/kg	25	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 07:32  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 12,16 Batch: WG1343218-5					
1,2-Dichlorobenzene	ND		ug/kg	100	--
1,3-Dichlorobenzene	ND		ug/kg	100	--
1,4-Dichlorobenzene	ND		ug/kg	100	--
Methyl tert butyl ether	ND		ug/kg	100	--
p/m-Xylene	ND		ug/kg	100	--
o-Xylene	ND		ug/kg	50	--
Xylenes, Total	ND		ug/kg	50	--
cis-1,2-Dichloroethene	ND		ug/kg	50	--
1,2-Dichloroethene, Total	ND		ug/kg	50	--
Dibromomethane	ND		ug/kg	100	--
1,2,3-Trichloropropane	ND		ug/kg	100	--
Styrene	ND		ug/kg	50	--
Dichlorodifluoromethane	ND		ug/kg	500	--
Acetone	ND		ug/kg	600	--
Carbon disulfide	ND		ug/kg	500	--
Methyl ethyl ketone	ND		ug/kg	500	--
Methyl isobutyl ketone	ND		ug/kg	500	--
2-Hexanone	ND		ug/kg	500	--
Bromochloromethane	ND		ug/kg	100	--
Tetrahydrofuran	ND		ug/kg	200	--
2,2-Dichloropropane	ND		ug/kg	100	--
1,2-Dibromoethane	ND		ug/kg	50	--
1,3-Dichloropropane	ND		ug/kg	100	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	--
Bromobenzene	ND		ug/kg	100	--
n-Butylbenzene	ND		ug/kg	50	--
sec-Butylbenzene	ND		ug/kg	50	--
tert-Butylbenzene	ND		ug/kg	100	--
o-Chlorotoluene	ND		ug/kg	100	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8260C  
**Analytical Date:** 02/21/20 07:32  
**Analyst:** MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 12,16 Batch: WG1343218-5					
p-Chlorotoluene	ND		ug/kg	100	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	--
Hexachlorobutadiene	ND		ug/kg	200	--
Isopropylbenzene	ND		ug/kg	50	--
p-Isopropyltoluene	ND		ug/kg	50	--
Naphthalene	ND		ug/kg	200	--
n-Propylbenzene	ND		ug/kg	50	--
1,2,3-Trichlorobenzene	ND		ug/kg	100	--
1,2,4-Trichlorobenzene	ND		ug/kg	100	--
1,3,5-Trimethylbenzene	ND		ug/kg	100	--
1,2,4-Trimethylbenzene	ND		ug/kg	100	--
Diethyl ether	ND		ug/kg	100	--
Diisopropyl Ether	ND		ug/kg	100	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	100	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	100	--
1,4-Dioxane	ND		ug/kg	4000	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	97		70-130

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 07:32  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 05,07,09,18,20 Batch: WG1343220-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	0.50	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/21/20 07:32  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 05,07,09,18,20 Batch: WG1343220-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	600	--
Carbon disulfide	ND		ug/kg	10	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8260C  
**Analytical Date:** 02/21/20 07:32  
**Analyst:** MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 05,07,09,18,20 Batch: WG1343220-5					
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
Diethyl ether	ND		ug/kg	2.0	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	97		70-130



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 12,16 Batch: WG1343218-3 WG1343218-4								
Methylene chloride	101		91		70-130	10		20
1,1-Dichloroethane	103		102		70-130	1		20
Chloroform	102		101		70-130	1		20
Carbon tetrachloride	100		102		70-130	2		20
1,2-Dichloropropane	103		103		70-130	0		20
Dibromochloromethane	83		84		70-130	1		20
1,1,2-Trichloroethane	88		88		70-130	0		20
Tetrachloroethene	81		81		70-130	0		20
Chlorobenzene	83		84		70-130	1		20
Trichlorofluoromethane	93		95		70-130	2		20
1,2-Dichloroethane	100		101		70-130	1		20
1,1,1-Trichloroethane	94		94		70-130	0		20
Bromodichloromethane	98		99		70-130	1		20
trans-1,3-Dichloropropene	83		85		70-130	2		20
cis-1,3-Dichloropropene	97		98		70-130	1		20
1,1-Dichloropropene	96		96		70-130	0		20
Bromoform	82		84		70-130	2		20
1,1,2,2-Tetrachloroethane	79		80		70-130	1		20
Benzene	97		98		70-130	1		20
Toluene	86		86		70-130	0		20
Ethylbenzene	86		86		70-130	0		20
Chloromethane	101		102		70-130	1		20
Bromomethane	121		116		70-130	4		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 12,16 Batch: WG1343218-3 WG1343218-4								
Vinyl chloride	94		100		70-130	6		20
Chloroethane	101		99		70-130	2		20
1,1-Dichloroethene	102		101		70-130	1		20
trans-1,2-Dichloroethene	103		104		70-130	1		20
Trichloroethene	96		97		70-130	1		20
1,2-Dichlorobenzene	82		82		70-130	0		20
1,3-Dichlorobenzene	81		81		70-130	0		20
1,4-Dichlorobenzene	80		80		70-130	0		20
Methyl tert butyl ether	103		104		70-130	1		20
p/m-Xylene	82		82		70-130	0		20
o-Xylene	82		82		70-130	0		20
cis-1,2-Dichloroethene	106		106		70-130	0		20
Dibromomethane	103		104		70-130	1		20
1,2,3-Trichloropropane	81		82		70-130	1		20
Styrene	83		84		70-130	1		20
Dichlorodifluoromethane	92		91		70-130	1		20
Acetone	100		103		70-130	3		20
Carbon disulfide	94		93		70-130	1		20
Methyl ethyl ketone	92		95		70-130	3		20
Methyl isobutyl ketone	90		93		70-130	3		20
2-Hexanone	78		80		70-130	3		20
Bromochloromethane	104		105		70-130	1		20
Tetrahydrofuran	104		105		70-130	1		20

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 12,16 Batch: WG1343218-3 WG1343218-4								
2,2-Dichloropropane	88		88		70-130	0		20
1,2-Dibromoethane	88		90		70-130	2		20
1,3-Dichloropropane	87		88		70-130	1		20
1,1,1,2-Tetrachloroethane	83		84		70-130	1		20
Bromobenzene	83		83		70-130	0		20
n-Butylbenzene	78		76		70-130	3		20
sec-Butylbenzene	80		79		70-130	1		20
tert-Butylbenzene	81		81		70-130	0		20
o-Chlorotoluene	80		80		70-130	0		20
p-Chlorotoluene	80		80		70-130	0		20
1,2-Dibromo-3-chloropropane	83		84		70-130	1		20
Hexachlorobutadiene	80		78		70-130	3		20
Isopropylbenzene	82		82		70-130	0		20
p-Isopropyltoluene	80		80		70-130	0		20
Naphthalene	83		85		70-130	2		20
n-Propylbenzene	81		80		70-130	1		20
1,2,3-Trichlorobenzene	83		83		70-130	0		20
1,2,4-Trichlorobenzene	82		80		70-130	2		20
1,3,5-Trimethylbenzene	81		80		70-130	1		20
1,2,4-Trimethylbenzene	82		81		70-130	1		20
Diethyl ether	106		108		70-130	2		20
Diisopropyl Ether	103		104		70-130	1		20
Ethyl-Tert-Butyl-Ether	103		104		70-130	1		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 12,16 Batch: WG1343218-3 WG1343218-4								
Tertiary-Amyl Methyl Ether	102		102		70-130	0		20
1,4-Dioxane	121		119		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		96		70-130
Toluene-d8	91		91		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	101		102		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 05,07,09,18,20 Batch: WG1343220-3 WG1343220-4								
Methylene chloride	101		91		70-130	10		20
1,1-Dichloroethane	103		102		70-130	1		20
Chloroform	102		101		70-130	1		20
Carbon tetrachloride	100		102		70-130	2		20
1,2-Dichloropropane	103		103		70-130	0		20
Dibromochloromethane	83		84		70-130	1		20
1,1,2-Trichloroethane	88		88		70-130	0		20
Tetrachloroethene	81		81		70-130	0		20
Chlorobenzene	83		84		70-130	1		20
Trichlorofluoromethane	93		95		70-130	2		20
1,2-Dichloroethane	100		101		70-130	1		20
1,1,1-Trichloroethane	94		94		70-130	0		20
Bromodichloromethane	98		99		70-130	1		20
trans-1,3-Dichloropropene	83		85		70-130	2		20
cis-1,3-Dichloropropene	97		98		70-130	1		20
1,1-Dichloropropene	96		96		70-130	0		20
Bromoform	82		84		70-130	2		20
1,1,2,2-Tetrachloroethane	79		80		70-130	1		20
Benzene	97		98		70-130	1		20
Toluene	86		86		70-130	0		20
Ethylbenzene	86		86		70-130	0		20
Chloromethane	101		102		70-130	1		20
Bromomethane	121		116		70-130	4		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 05,07,09,18,20 Batch: WG1343220-3 WG1343220-4								
Vinyl chloride	94		100		70-130	6		20
Chloroethane	101		99		70-130	2		20
1,1-Dichloroethene	102		101		70-130	1		20
trans-1,2-Dichloroethene	103		104		70-130	1		20
Trichloroethene	96		97		70-130	1		20
1,2-Dichlorobenzene	82		82		70-130	0		20
1,3-Dichlorobenzene	81		81		70-130	0		20
1,4-Dichlorobenzene	80		80		70-130	0		20
Methyl tert butyl ether	103		104		70-130	1		20
p/m-Xylene	82		82		70-130	0		20
o-Xylene	82		82		70-130	0		20
cis-1,2-Dichloroethene	106		106		70-130	0		20
Dibromomethane	103		104		70-130	1		20
1,2,3-Trichloropropane	81		82		70-130	1		20
Styrene	83		84		70-130	1		20
Dichlorodifluoromethane	92		91		70-130	1		20
Acetone	100		103		70-130	3		20
Carbon disulfide	94		93		70-130	1		20
Methyl ethyl ketone	92		95		70-130	3		20
Methyl isobutyl ketone	90		93		70-130	3		20
2-Hexanone	78		80		70-130	3		20
Bromochloromethane	104		105		70-130	1		20
Tetrahydrofuran	104		105		70-130	1		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 05,07,09,18,20 Batch: WG1343220-3 WG1343220-4								
2,2-Dichloropropane	88		88		70-130	0		20
1,2-Dibromoethane	88		90		70-130	2		20
1,3-Dichloropropane	87		88		70-130	1		20
1,1,1,2-Tetrachloroethane	83		84		70-130	1		20
Bromobenzene	83		83		70-130	0		20
n-Butylbenzene	78		76		70-130	3		20
sec-Butylbenzene	80		79		70-130	1		20
tert-Butylbenzene	81		81		70-130	0		20
o-Chlorotoluene	80		80		70-130	0		20
p-Chlorotoluene	80		80		70-130	0		20
1,2-Dibromo-3-chloropropane	83		84		70-130	1		20
Hexachlorobutadiene	80		78		70-130	3		20
Isopropylbenzene	82		82		70-130	0		20
p-Isopropyltoluene	80		80		70-130	0		20
Naphthalene	83		85		70-130	2		20
n-Propylbenzene	81		80		70-130	1		20
1,2,3-Trichlorobenzene	83		83		70-130	0		20
1,2,4-Trichlorobenzene	82		80		70-130	2		20
1,3,5-Trimethylbenzene	81		80		70-130	1		20
1,2,4-Trimethylbenzene	82		81		70-130	1		20
Diethyl ether	106		108		70-130	2		20
Diisopropyl Ether	103		104		70-130	1		20
Ethyl-Tert-Butyl-Ether	103		104		70-130	1		20

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 05,07,09,18,20 Batch: WG1343220-3 WG1343220-4								
Tertiary-Amyl Methyl Ether	102		102		70-130	0		20
1,4-Dioxane	121		119		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		96		70-130
Toluene-d8	91		91		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	101		102		70-130



# SEMIVOLATILES

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-04  
 Client ID: TP-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 21:58  
 Analyst: WR  
 Percent Solids: 83%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	160	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	--	1
Hexachlorobenzene	ND		ug/kg	82	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	82	--	1
2-Chloronaphthalene	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	190	--	1
1,3-Dichlorobenzene	ND		ug/kg	190	--	1
1,4-Dichlorobenzene	ND		ug/kg	82	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	--	1
2,4-Dinitrotoluene	ND		ug/kg	82	--	1
2,6-Dinitrotoluene	ND		ug/kg	190	--	1
Azobenzene	ND		ug/kg	190	--	1
Fluoranthene	ND		ug/kg	120	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	82	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	--	1
Hexachlorobutadiene	ND		ug/kg	190	--	1
Hexachloroethane	ND		ug/kg	82	--	1
Isophorone	ND		ug/kg	180	--	1
Naphthalene	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	180	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	--	1
Butyl benzyl phthalate	ND		ug/kg	190	--	1
Di-n-butylphthalate	ND		ug/kg	190	--	1
Di-n-octylphthalate	ND		ug/kg	190	--	1
Diethyl phthalate	ND		ug/kg	190	--	1
Dimethyl phthalate	ND		ug/kg	82	--	1
Benzo(a)anthracene	ND		ug/kg	120	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-04**Date Collected:** 02/18/20 14:00**Client ID:** TP-4**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	160	--	1
Benzo(b)fluoranthene	ND		ug/kg	120	--	1
Benzo(k)fluoranthene	ND		ug/kg	120	--	1
Chrysene	ND		ug/kg	120	--	1
Acenaphthylene	ND		ug/kg	160	--	1
Anthracene	ND		ug/kg	120	--	1
Benzo(ghi)perylene	ND		ug/kg	160	--	1
Fluorene	ND		ug/kg	190	--	1
Phenanthrene	ND		ug/kg	120	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	82	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	160	--	1
Pyrene	ND		ug/kg	120	--	1
Aniline	ND		ug/kg	230	--	1
4-Chloroaniline	ND		ug/kg	190	--	1
Dibenzofuran	ND		ug/kg	190	--	1
2-Methylnaphthalene	ND		ug/kg	82	--	1
Acetophenone	ND		ug/kg	190	--	1
2,4,6-Trichlorophenol	ND		ug/kg	82	--	1
2-Chlorophenol	ND		ug/kg	82	--	1
2,4-Dichlorophenol	ND		ug/kg	82	--	1
2,4-Dimethylphenol	ND		ug/kg	82	--	1
2-Nitrophenol	ND		ug/kg	420	--	1
4-Nitrophenol	ND		ug/kg	270	--	1
2,4-Dinitrophenol	ND		ug/kg	930	--	1
Pentachlorophenol	ND		ug/kg	390	--	1
Phenol	ND		ug/kg	190	--	1
2-Methylphenol	ND		ug/kg	190	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	--	1
2,4,5-Trichlorophenol	ND		ug/kg	190	--	1
Pyridine	ND		ug/kg	210	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-04

Date Collected: 02/18/20 14:00

Client ID: TP-4

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		30-130
Phenol-d6	73		30-130
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	83		30-130
2,4,6-Tribromophenol	77		30-130
4-Terphenyl-d14	80		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-06  
 Client ID: TP-5  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/22/20 21:37  
 Analyst: IM  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	--	1
Hexachlorobenzene	ND		ug/kg	78	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	78	--	1
2-Chloronaphthalene	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	190	--	1
1,3-Dichlorobenzene	ND		ug/kg	190	--	1
1,4-Dichlorobenzene	ND		ug/kg	78	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	--	1
2,4-Dinitrotoluene	ND		ug/kg	78	--	1
2,6-Dinitrotoluene	ND		ug/kg	190	--	1
Azobenzene	ND		ug/kg	190	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	78	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	190	--	1
Hexachloroethane	ND		ug/kg	78	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	--	1
Butyl benzyl phthalate	ND		ug/kg	190	--	1
Di-n-butylphthalate	ND		ug/kg	190	--	1
Di-n-octylphthalate	ND		ug/kg	190	--	1
Diethyl phthalate	ND		ug/kg	190	--	1
Dimethyl phthalate	ND		ug/kg	78	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-06**Date Collected:** 02/19/20 14:00**Client ID:** TP-5**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	150	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	190	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	78	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	190	--	1
Dibenzofuran	ND		ug/kg	190	--	1
2-Methylnaphthalene	ND		ug/kg	78	--	1
Acetophenone	ND		ug/kg	190	--	1
2,4,6-Trichlorophenol	ND		ug/kg	78	--	1
2-Chlorophenol	ND		ug/kg	78	--	1
2,4-Dichlorophenol	ND		ug/kg	78	--	1
2,4-Dimethylphenol	ND		ug/kg	78	--	1
2-Nitrophenol	ND		ug/kg	400	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	890	--	1
Pentachlorophenol	ND		ug/kg	370	--	1
Phenol	ND		ug/kg	190	--	1
2-Methylphenol	ND		ug/kg	190	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	--	1
2,4,5-Trichlorophenol	ND		ug/kg	190	--	1
Pyridine	ND		ug/kg	200	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-06

Date Collected: 02/19/20 14:00

Client ID: TP-5

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		30-130
Phenol-d6	85		30-130
Nitrobenzene-d5	77		30-130
2-Fluorobiphenyl	83		30-130
2,4,6-Tribromophenol	103		30-130
4-Terphenyl-d14	92		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-08  
 Client ID: TP-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/22/20 21:14  
 Analyst: IM  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	--	1
Hexachlorobenzene	ND		ug/kg	78	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	78	--	1
2-Chloronaphthalene	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	190	--	1
1,3-Dichlorobenzene	ND		ug/kg	190	--	1
1,4-Dichlorobenzene	ND		ug/kg	78	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	--	1
2,4-Dinitrotoluene	ND		ug/kg	78	--	1
2,6-Dinitrotoluene	ND		ug/kg	190	--	1
Azobenzene	ND		ug/kg	190	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	78	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	190	--	1
Hexachloroethane	ND		ug/kg	78	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	--	1
Butyl benzyl phthalate	ND		ug/kg	190	--	1
Di-n-butylphthalate	ND		ug/kg	190	--	1
Di-n-octylphthalate	ND		ug/kg	190	--	1
Diethyl phthalate	ND		ug/kg	190	--	1
Dimethyl phthalate	ND		ug/kg	78	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-08**Date Collected:** 02/19/20 14:00**Client ID:** TP-6**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	150	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	190	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	78	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	190	--	1
Dibenzofuran	ND		ug/kg	190	--	1
2-Methylnaphthalene	ND		ug/kg	78	--	1
Acetophenone	ND		ug/kg	190	--	1
2,4,6-Trichlorophenol	ND		ug/kg	78	--	1
2-Chlorophenol	ND		ug/kg	78	--	1
2,4-Dichlorophenol	ND		ug/kg	78	--	1
2,4-Dimethylphenol	ND		ug/kg	78	--	1
2-Nitrophenol	ND		ug/kg	400	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	900	--	1
Pentachlorophenol	ND		ug/kg	370	--	1
Phenol	ND		ug/kg	190	--	1
2-Methylphenol	ND		ug/kg	190	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	--	1
2,4,5-Trichlorophenol	ND		ug/kg	190	--	1
Pyridine	ND		ug/kg	200	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-08

Date Collected: 02/19/20 14:00

Client ID: TP-6

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		30-130
Phenol-d6	95		30-130
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	110		30-130
4-Terphenyl-d14	93		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-10  
 Client ID: TP-9 3-6'  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 3-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/24/20 06:53  
 Analyst: SZ  
 Percent Solids: 89%

Extraction Method: EPA 3546  
 Extraction Date: 02/22/20 20:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs - Westborough Lab						
Acenaphthene	250		ug/kg	150	--	1
Fluoranthene	4200		ug/kg	110	--	1
Naphthalene	ND		ug/kg	180	--	1
Benzo(a)anthracene	2000		ug/kg	110	--	1
Benzo(a)pyrene	2000		ug/kg	150	--	1
Benzo(b)fluoranthene	2400		ug/kg	110	--	1
Benzo(k)fluoranthene	740		ug/kg	110	--	1
Chrysene	1900		ug/kg	110	--	1
Acenaphthylene	200		ug/kg	150	--	1
Anthracene	580		ug/kg	110	--	1
Benzo(ghi)perylene	1200		ug/kg	150	--	1
Fluorene	200		ug/kg	180	--	1
Phenanthrene	2600		ug/kg	110	--	1
Dibenzo(a,h)anthracene	300		ug/kg	77	--	1
Indeno(1,2,3-cd)pyrene	1200		ug/kg	150	--	1
Pyrene	3600		ug/kg	110	--	1
2-Methylnaphthalene	ND		ug/kg	77	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	74		30-130
4-Terphenyl-d14	69		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-11  
 Client ID: TP-7  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/22/20 20:51  
 Analyst: IM  
 Percent Solids: 82%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	160	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	--	1
Hexachlorobenzene	ND		ug/kg	84	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	84	--	1
2-Chloronaphthalene	ND		ug/kg	200	--	1
1,2-Dichlorobenzene	ND		ug/kg	200	--	1
1,3-Dichlorobenzene	ND		ug/kg	200	--	1
1,4-Dichlorobenzene	ND		ug/kg	84	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	--	1
2,4-Dinitrotoluene	ND		ug/kg	84	--	1
2,6-Dinitrotoluene	ND		ug/kg	200	--	1
Azobenzene	ND		ug/kg	200	--	1
Fluoranthene	ND		ug/kg	120	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	84	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	--	1
Hexachlorobutadiene	ND		ug/kg	200	--	1
Hexachloroethane	ND		ug/kg	84	--	1
Isophorone	ND		ug/kg	180	--	1
Naphthalene	ND		ug/kg	200	--	1
Nitrobenzene	ND		ug/kg	180	--	1
Bis(2-ethylhexyl)phthalate	740		ug/kg	200	--	1
Butyl benzyl phthalate	ND		ug/kg	200	--	1
Di-n-butylphthalate	ND		ug/kg	200	--	1
Di-n-octylphthalate	ND		ug/kg	200	--	1
Diethyl phthalate	ND		ug/kg	200	--	1
Dimethyl phthalate	ND		ug/kg	84	--	1
Benzo(a)anthracene	ND		ug/kg	120	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-11**Date Collected:** 02/18/20 14:00**Client ID:** TP-7**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	160	--	1
Benzo(b)fluoranthene	ND		ug/kg	120	--	1
Benzo(k)fluoranthene	ND		ug/kg	120	--	1
Chrysene	ND		ug/kg	120	--	1
Acenaphthylene	ND		ug/kg	160	--	1
Anthracene	ND		ug/kg	120	--	1
Benzo(ghi)perylene	ND		ug/kg	160	--	1
Fluorene	ND		ug/kg	200	--	1
Phenanthrene	130		ug/kg	120	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	84	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	160	--	1
Pyrene	ND		ug/kg	120	--	1
Aniline	ND		ug/kg	240	--	1
4-Chloroaniline	ND		ug/kg	200	--	1
Dibenzofuran	ND		ug/kg	200	--	1
2-Methylnaphthalene	490		ug/kg	84	--	1
Acetophenone	ND		ug/kg	200	--	1
2,4,6-Trichlorophenol	ND		ug/kg	84	--	1
2-Chlorophenol	ND		ug/kg	84	--	1
2,4-Dichlorophenol	ND		ug/kg	84	--	1
2,4-Dimethylphenol	ND		ug/kg	84	--	1
2-Nitrophenol	ND		ug/kg	430	--	1
4-Nitrophenol	ND		ug/kg	280	--	1
2,4-Dinitrophenol	ND		ug/kg	960	--	1
Pentachlorophenol	ND		ug/kg	400	--	1
Phenol	ND		ug/kg	200	--	1
2-Methylphenol	ND		ug/kg	200	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	--	1
2,4,5-Trichlorophenol	ND		ug/kg	200	--	1
Pyridine	ND		ug/kg	220	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-11

Date Collected: 02/18/20 14:00

Client ID: TP-7

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		30-130
Phenol-d6	90		30-130
Nitrobenzene-d5	76		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	91		30-130
4-Terphenyl-d14	84		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-15  
 Client ID: TP-10  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/22/20 20:27  
 Analyst: IM  
 Percent Solids: 79%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	170	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	210	--	1
Hexachlorobenzene	ND		ug/kg	88	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	88	--	1
2-Chloronaphthalene	ND		ug/kg	210	--	1
1,2-Dichlorobenzene	ND		ug/kg	210	--	1
1,3-Dichlorobenzene	ND		ug/kg	210	--	1
1,4-Dichlorobenzene	ND		ug/kg	88	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	210	--	1
2,4-Dinitrotoluene	ND		ug/kg	88	--	1
2,6-Dinitrotoluene	ND		ug/kg	210	--	1
Azobenzene	ND		ug/kg	210	--	1
Fluoranthene	ND		ug/kg	120	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	210	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	88	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	--	1
Hexachlorobutadiene	ND		ug/kg	210	--	1
Hexachloroethane	ND		ug/kg	88	--	1
Isophorone	ND		ug/kg	190	--	1
Naphthalene	ND		ug/kg	210	--	1
Nitrobenzene	ND		ug/kg	190	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	210	--	1
Butyl benzyl phthalate	ND		ug/kg	210	--	1
Di-n-butylphthalate	ND		ug/kg	210	--	1
Di-n-octylphthalate	ND		ug/kg	210	--	1
Diethyl phthalate	ND		ug/kg	210	--	1
Dimethyl phthalate	ND		ug/kg	88	--	1
Benzo(a)anthracene	ND		ug/kg	120	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-15**Date Collected:** 02/18/20 14:00**Client ID:** TP-10**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	170	--	1
Benzo(b)fluoranthene	ND		ug/kg	120	--	1
Benzo(k)fluoranthene	ND		ug/kg	120	--	1
Chrysene	ND		ug/kg	120	--	1
Acenaphthylene	ND		ug/kg	170	--	1
Anthracene	ND		ug/kg	120	--	1
Benzo(ghi)perylene	ND		ug/kg	170	--	1
Fluorene	ND		ug/kg	210	--	1
Phenanthrene	ND		ug/kg	120	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	88	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	170	--	1
Pyrene	ND		ug/kg	120	--	1
Aniline	ND		ug/kg	250	--	1
4-Chloroaniline	ND		ug/kg	210	--	1
Dibenzofuran	ND		ug/kg	210	--	1
2-Methylnaphthalene	ND		ug/kg	88	--	1
Acetophenone	ND		ug/kg	210	--	1
2,4,6-Trichlorophenol	ND		ug/kg	88	--	1
2-Chlorophenol	ND		ug/kg	88	--	1
2,4-Dichlorophenol	ND		ug/kg	88	--	1
2,4-Dimethylphenol	ND		ug/kg	88	--	1
2-Nitrophenol	ND		ug/kg	450	--	1
4-Nitrophenol	ND		ug/kg	290	--	1
2,4-Dinitrophenol	ND		ug/kg	1000	--	1
Pentachlorophenol	ND		ug/kg	420	--	1
Phenol	ND		ug/kg	210	--	1
2-Methylphenol	ND		ug/kg	210	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	300	--	1
2,4,5-Trichlorophenol	ND		ug/kg	210	--	1
Pyridine	ND		ug/kg	220	--	1



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-15

Date Collected: 02/18/20 14:00

Client ID: TP-10

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		30-130
Phenol-d6	78		30-130
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	77		30-130
2,4,6-Tribromophenol	91		30-130
4-Terphenyl-d14	89		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-17  
 Client ID: TP-11  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/22/20 20:04  
 Analyst: IM  
 Percent Solids: 87%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	--	1
Hexachlorobenzene	ND		ug/kg	80	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	80	--	1
2-Chloronaphthalene	ND		ug/kg	190	--	1
1,2-Dichlorobenzene	ND		ug/kg	190	--	1
1,3-Dichlorobenzene	ND		ug/kg	190	--	1
1,4-Dichlorobenzene	ND		ug/kg	80	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	--	1
2,4-Dinitrotoluene	ND		ug/kg	80	--	1
2,6-Dinitrotoluene	ND		ug/kg	190	--	1
Azobenzene	ND		ug/kg	190	--	1
Fluoranthene	ND		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	80	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	--	1
Hexachlorobutadiene	ND		ug/kg	190	--	1
Hexachloroethane	ND		ug/kg	80	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	ND		ug/kg	190	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	--	1
Butyl benzyl phthalate	ND		ug/kg	190	--	1
Di-n-butylphthalate	ND		ug/kg	190	--	1
Di-n-octylphthalate	ND		ug/kg	190	--	1
Diethyl phthalate	ND		ug/kg	190	--	1
Dimethyl phthalate	ND		ug/kg	80	--	1
Benzo(a)anthracene	ND		ug/kg	110	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-17**Date Collected:** 02/19/20 14:00**Client ID:** TP-11**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	150	--	1
Benzo(b)fluoranthene	ND		ug/kg	110	--	1
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	ND		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	190	--	1
Phenanthrene	ND		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	80	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	--	1
Pyrene	ND		ug/kg	110	--	1
Aniline	ND		ug/kg	230	--	1
4-Chloroaniline	ND		ug/kg	190	--	1
Dibenzofuran	ND		ug/kg	190	--	1
2-Methylnaphthalene	ND		ug/kg	80	--	1
Acetophenone	ND		ug/kg	190	--	1
2,4,6-Trichlorophenol	ND		ug/kg	80	--	1
2-Chlorophenol	ND		ug/kg	80	--	1
2,4-Dichlorophenol	ND		ug/kg	80	--	1
2,4-Dimethylphenol	ND		ug/kg	80	--	1
2-Nitrophenol	ND		ug/kg	410	--	1
4-Nitrophenol	ND		ug/kg	270	--	1
2,4-Dinitrophenol	ND		ug/kg	920	--	1
Pentachlorophenol	ND		ug/kg	380	--	1
Phenol	ND		ug/kg	190	--	1
2-Methylphenol	ND		ug/kg	190	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	--	1
2,4,5-Trichlorophenol	ND		ug/kg	190	--	1
Pyridine	ND		ug/kg	210	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-17

Date Collected: 02/19/20 14:00

Client ID: TP-11

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		30-130
Phenol-d6	73		30-130
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	75		30-130
2,4,6-Tribromophenol	93		30-130
4-Terphenyl-d14	93		30-130

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8270D  
**Analytical Date:** 02/21/20 20:23  
**Analyst:** WR

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 04,06,08,11,15,17 Batch: WG1342983-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	68	--
Bis(2-chloroethyl)ether	ND		ug/kg	68	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	68	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	68	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	98	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	68	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	68	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	68	--
Benzo(a)anthracene	ND		ug/kg	98	--
Benzo(a)pyrene	ND		ug/kg	130	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8270D  
**Analytical Date:** 02/21/20 20:23  
**Analyst:** WR

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 04,06,08,11,15,17 Batch: WG1342983-1					
Benzo(b)fluoranthene	ND		ug/kg	98	--
Benzo(k)fluoranthene	ND		ug/kg	98	--
Chrysene	ND		ug/kg	98	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	98	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	98	--
Dibenzo(a,h)anthracene	ND		ug/kg	68	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	98	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	68	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	68	--
2-Chlorophenol	ND		ug/kg	68	--
2,4-Dichlorophenol	ND		ug/kg	68	--
2,4-Dimethylphenol	ND		ug/kg	68	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
Pentachlorophenol	ND		ug/kg	330	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--
Pyridine	ND		ug/kg	180	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 20:23  
 Analyst: WR

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:45

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 04,06,08,11,15,17 Batch: WG1342983-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		30-130
Phenol-d6	81		30-130
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	80		30-130
4-Terphenyl-d14	94		30-130

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8270D  
**Analytical Date:** 02/23/20 22:26  
**Analyst:** SZ

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/22/20 19:06

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 10 Batch: WG1343511-1					
Acenaphthene	ND		ug/kg	130	--
Fluoranthene	ND		ug/kg	98	--
Naphthalene	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	98	--
Benzo(a)pyrene	ND		ug/kg	130	--
Benzo(b)fluoranthene	ND		ug/kg	98	--
Benzo(k)fluoranthene	ND		ug/kg	98	--
Chrysene	ND		ug/kg	98	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	98	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	98	--
Dibenzo(a,h)anthracene	ND		ug/kg	69	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	98	--
2-Methylnaphthalene	ND		ug/kg	69	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	93		30-130
4-Terphenyl-d14	117		30-130





# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342983-2 WG1342983-3								
Acenaphthene	80		86		40-140	7		30
1,2,4-Trichlorobenzene	80		88		40-140	10		30
Hexachlorobenzene	84		92		40-140	9		30
Bis(2-chloroethyl)ether	72		77		40-140	7		30
2-Chloronaphthalene	84		90		40-140	7		30
1,2-Dichlorobenzene	75		82		40-140	9		30
1,3-Dichlorobenzene	74		81		40-140	9		30
1,4-Dichlorobenzene	76		80		40-140	5		30
3,3'-Dichlorobenzidine	49		53		40-140	8		30
2,4-Dinitrotoluene	93		101		40-140	8		30
2,6-Dinitrotoluene	94		101		40-140	7		30
Azobenzene	66		72		40-140	9		30
Fluoranthene	82		88		40-140	7		30
4-Bromophenyl phenyl ether	84		89		40-140	6		30
Bis(2-chloroisopropyl)ether	61		67		40-140	9		30
Bis(2-chloroethoxy)methane	70		76		40-140	8		30
Hexachlorobutadiene	77		85		40-140	10		30
Hexachloroethane	73		79		40-140	8		30
Isophorone	70		75		40-140	7		30
Naphthalene	79		85		40-140	7		30
Nitrobenzene	67		73		40-140	9		30
Bis(2-ethylhexyl)phthalate	84		92		40-140	9		30
Butyl benzyl phthalate	84		89		40-140	6		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342983-2 WG1342983-3								
Di-n-butylphthalate	82		87		40-140	6		30
Di-n-octylphthalate	82		89		40-140	8		30
Diethyl phthalate	82		89		40-140	8		30
Dimethyl phthalate	82		88		40-140	7		30
Benzo(a)anthracene	79		86		40-140	8		30
Benzo(a)pyrene	81		88		40-140	8		30
Benzo(b)fluoranthene	85		92		40-140	8		30
Benzo(k)fluoranthene	84		94		40-140	11		30
Chrysene	82		87		40-140	6		30
Acenaphthylene	80		86		40-140	7		30
Anthracene	81		88		40-140	8		30
Benzo(ghi)perylene	82		88		40-140	7		30
Fluorene	82		88		40-140	7		30
Phenanthrene	80		86		40-140	7		30
Dibenzo(a,h)anthracene	87		92		40-140	6		30
Indeno(1,2,3-cd)pyrene	82		89		40-140	8		30
Pyrene	79		86		40-140	8		30
Aniline	53		54		40-140	2		30
4-Chloroaniline	53		54		40-140	2		30
Dibenzofuran	83		90		40-140	8		30
2-Methylnaphthalene	81		87		40-140	7		30
Acetophenone	70		76		40-140	8		30
2,4,6-Trichlorophenol	86		95		30-130	10		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342983-2 WG1342983-3								
2-Chlorophenol	83		89		30-130	7		30
2,4-Dichlorophenol	86		94		30-130	9		30
2,4-Dimethylphenol	78		85		30-130	9		30
2-Nitrophenol	96		104		30-130	8		30
4-Nitrophenol	74		80		30-130	8		30
2,4-Dinitrophenol	84		95		30-130	12		30
Pentachlorophenol	72		80		30-130	11		30
Phenol	79		85		30-130	7		30
2-Methylphenol	77		84		30-130	9		30
3-Methylphenol/4-Methylphenol	77		82		30-130	6		30
2,4,5-Trichlorophenol	88		94		30-130	7		30
Pyridine	52		54		30-130	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	79		87		30-130
Phenol-d6	76		83		30-130
Nitrobenzene-d5	70		75		30-130
2-Fluorobiphenyl	81		90		30-130
2,4,6-Tribromophenol	78		86		30-130
4-Terphenyl-d14	84		90		30-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 10 Batch: WG1343511-2 WG1343511-3								
Acenaphthene	97		86		40-140	12		30
Fluoranthene	103		90		40-140	13		30
Naphthalene	95		84		40-140	12		30
Benzo(a)anthracene	99		86		40-140	14		30
Benzo(a)pyrene	106		93		40-140	13		30
Benzo(b)fluoranthene	107		91		40-140	16		30
Benzo(k)fluoranthene	101		91		40-140	10		30
Chrysene	100		88		40-140	13		30
Acenaphthylene	99		86		40-140	14		30
Anthracene	99		88		40-140	12		30
Benzo(ghi)perylene	100		87		40-140	14		30
Fluorene	101		88		40-140	14		30
Phenanthrene	96		85		40-140	12		30
Dibenzo(a,h)anthracene	102		88		40-140	15		30
Indeno(1,2,3-cd)pyrene	102		87		40-140	16		30
Pyrene	100		87		40-140	14		30
2-Methylnaphthalene	98		86		40-140	13		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 10 Batch: WG1343511-2 WG1343511-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Nitrobenzene-d5	96		86		30-130
2-Fluorobiphenyl	92		81		30-130
4-Terphenyl-d14	109		95		30-130

# **PETROLEUM HYDROCARBONS**

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-04  
 Client ID: TP-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/21/20 09:47  
 Analyst: SC  
 Percent Solids: 83%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	ND		ug/kg	39200	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	79			40-140		

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-06  
 Client ID: TP-5  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/21/20 09:14  
 Analyst: SC  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	ND		ug/kg	36600	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	85			40-140		



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**SAMPLE RESULTS**

**Lab ID:** L2007468-08  
**Client ID:** TP-6  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/19/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 02/21/20 08:10  
**Analyst:** SC  
**Percent Solids:** 88%

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/21/20 01:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	ND		ug/kg	37400	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	84			40-140		

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-11 D  
 Client ID: TP-7  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/24/20 08:03  
 Analyst: MEO  
 Percent Solids: 82%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	1100000		ug/kg	200000	--	5
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	81			40-140		

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**SAMPLE RESULTS**

**Lab ID:** L2007468-15  
**Client ID:** TP-10  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 02/21/20 09:14  
**Analyst:** SC  
**Percent Solids:** 79%

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/21/20 01:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	ND		ug/kg	40300	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	96			40-140		

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**SAMPLE RESULTS**

**Lab ID:** L2007468-17  
**Client ID:** TP-11  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/19/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 02/21/20 08:42  
**Analyst:** SC  
**Percent Solids:** 87%

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/21/20 01:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	ND		ug/kg	37400	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	89			40-140		

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8015D(M)  
 Analytical Date: 02/20/20 18:13  
 Analyst: AN

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 11:09

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 04,06,08,11,15,17 Batch: WG1342695-1					
TPH (C10-C36)	ND		ug/kg	32000	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	59		40-140

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342695-2								
TPH (C10-C36)	81		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	66				40-140

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-19  
 Client ID: TP-9, S-3  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12  
 Matrix: Fill  
 Analytical Method: 131, VPH-18-2.1  
 Analytical Date: 02/21/20 12:02  
 Analyst: BAD  
 Percent Solids: 82%

**Trap:** EST, Carbopack B/Carboxen 1000&1001**Analytical Column:** Restek, RTX-502.2, 105m, 0.53ID, 3um**Quality Control Information**

Condition of sample received:

Satisfactory

Sample Temperature upon receipt:

Received on Ice

Were samples received in methanol?

Covering the Soil

Methanol ratio:

1:1 +/- 25%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	6.12	--	1
C9-C12 Aliphatics	ND		mg/kg	6.12	--	1
C9-C10 Aromatics	ND		mg/kg	6.12	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	6.12	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	6.12	--	1
Benzene	ND		mg/kg	0.122	--	1
Toluene	ND		mg/kg	0.122	--	1
Ethylbenzene	ND		mg/kg	0.122	--	1
p/m-Xylene	ND		mg/kg	0.122	--	1
o-Xylene	ND		mg/kg	0.122	--	1
Methyl tert butyl ether	ND		mg/kg	0.061	--	1
Naphthalene	ND		mg/kg	0.245	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	129		70-130
2,5-Dibromotoluene-FID	120		70-130



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-20  
 Client ID: TP-8, S-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 10-12  
 Matrix: Fill  
 Analytical Method: 131, VPH-18-2.1  
 Analytical Date: 02/21/20 12:33  
 Analyst: BAD  
 Percent Solids: 82%

**Trap:** EST, Carboxen 1000&1001**Analytical Column:** Restek, RTX-502.2, 105m, 0.53ID, 3um**Quality Control Information**

Condition of sample received:

Satisfactory

Sample Temperature upon receipt:

Received on Ice

Were samples received in methanol?

Covering the Soil

Methanol ratio:

1.4:1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		mg/kg	9.76	--	1
C9-C12 Aliphatics	ND		mg/kg	9.76	--	1
C9-C10 Aromatics	ND		mg/kg	9.76	--	1
C5-C8 Aliphatics, Adjusted	ND		mg/kg	9.76	--	1
C9-C12 Aliphatics, Adjusted	ND		mg/kg	9.76	--	1
Benzene	ND		mg/kg	0.195	--	1
Toluene	ND		mg/kg	0.195	--	1
Ethylbenzene	ND		mg/kg	0.195	--	1
p/m-Xylene	ND		mg/kg	0.195	--	1
o-Xylene	ND		mg/kg	0.195	--	1
Methyl tert butyl ether	ND		mg/kg	0.098	--	1
Naphthalene	ND		mg/kg	0.390	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	156	Q	70-130
2,5-Dibromotoluene-FID	146	Q	70-130





**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 131, VPH-18-2.1  
**Analytical Date:** 02/21/20 10:01  
**Analyst:** BAD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 19-20 Batch: WG1343449-4					
C5-C8 Aliphatics	ND		mg/kg	5.00	--
C9-C12 Aliphatics	ND		mg/kg	5.00	--
C9-C10 Aromatics	ND		mg/kg	5.00	--
C5-C8 Aliphatics, Adjusted	ND		mg/kg	5.00	--
C9-C12 Aliphatics, Adjusted	ND		mg/kg	5.00	--
Benzene	ND		mg/kg	0.100	--
Toluene	ND		mg/kg	0.100	--
Ethylbenzene	ND		mg/kg	0.100	--
p/m-Xylene	ND		mg/kg	0.100	--
o-Xylene	ND		mg/kg	0.100	--
Methyl tert butyl ether	ND		mg/kg	0.050	--
Naphthalene	ND		mg/kg	0.200	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	123		70-130
2,5-Dibromotoluene-FID	115		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 19-20 Batch: WG1343449-2 WG1343449-3								
C5-C8 Aliphatics	105		117		70-130	11		25
C9-C12 Aliphatics	108		121		70-130	11		25
C9-C10 Aromatics	105		116		70-130	10		25
Benzene	100		110		70-130	10		25
Toluene	100		111		70-130	10		25
Ethylbenzene	104		115		70-130	10		25
p/m-Xylene	104		115		70-130	10		25
o-Xylene	102		113		70-130	10		25
Methyl tert butyl ether	101		112		70-130	10		25
Naphthalene	100		112		70-130	11		25
1,2,4-Trimethylbenzene	105		116		70-130	10		25
Pentane	102		114		70-130	11		25
2-Methylpentane	106		118		70-130	11		25
2,2,4-Trimethylpentane	104		115		70-130	10		25
n-Nonane	107		119		30-130	11		25
n-Decane	111		123		70-130	10		25
n-Butylcyclohexane	107		119		70-130	11		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	101		113		70-130
2,5-Dibromotoluene-FID	94		105		70-130

# PCBS

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-04  
 Client ID: TP-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 23:33  
 Analyst: KB  
 Percent Solids: 83%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.2	--	1	A
Aroclor 1221	ND		ug/kg	39.2	--	1	A
Aroclor 1232	ND		ug/kg	39.2	--	1	A
Aroclor 1242	ND		ug/kg	39.2	--	1	A
Aroclor 1248	ND		ug/kg	39.2	--	1	A
Aroclor 1254	ND		ug/kg	39.2	--	1	A
Aroclor 1260	ND		ug/kg	39.2	--	1	A
Aroclor 1262	ND		ug/kg	39.2	--	1	A
Aroclor 1268	ND		ug/kg	39.2	--	1	A
PCBs, Total	ND		ug/kg	39.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	64		30-150	B
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	61		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-06  
 Client ID: TP-5  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 23:45  
 Analyst: KB  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.6	--	1	A
Aroclor 1221	ND		ug/kg	36.6	--	1	A
Aroclor 1232	ND		ug/kg	36.6	--	1	A
Aroclor 1242	ND		ug/kg	36.6	--	1	A
Aroclor 1248	ND		ug/kg	36.6	--	1	A
Aroclor 1254	ND		ug/kg	36.6	--	1	A
Aroclor 1260	ND		ug/kg	36.6	--	1	A
Aroclor 1262	ND		ug/kg	36.6	--	1	A
Aroclor 1268	ND		ug/kg	36.6	--	1	A
PCBs, Total	ND		ug/kg	36.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	64		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	59		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-08  
 Client ID: TP-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 23:57  
 Analyst: KB  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.4	--	1	A
Aroclor 1221	ND		ug/kg	37.4	--	1	A
Aroclor 1232	ND		ug/kg	37.4	--	1	A
Aroclor 1242	ND		ug/kg	37.4	--	1	A
Aroclor 1248	ND		ug/kg	37.4	--	1	A
Aroclor 1254	ND		ug/kg	37.4	--	1	A
Aroclor 1260	ND		ug/kg	37.4	--	1	A
Aroclor 1262	ND		ug/kg	37.4	--	1	A
Aroclor 1268	ND		ug/kg	37.4	--	1	A
PCBs, Total	ND		ug/kg	37.4	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	74		30-150	B
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	68		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-11  
 Client ID: TP-7  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/22/20 00:09  
 Analyst: KB  
 Percent Solids: 82%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	40.3	--	1	A
Aroclor 1221	ND		ug/kg	40.3	--	1	A
Aroclor 1232	ND		ug/kg	40.3	--	1	A
Aroclor 1242	ND		ug/kg	40.3	--	1	B
Aroclor 1248	ND		ug/kg	40.3	--	1	A
Aroclor 1254	ND		ug/kg	40.3	--	1	B
Aroclor 1260	ND		ug/kg	40.3	--	1	B
Aroclor 1262	ND		ug/kg	40.3	--	1	A
Aroclor 1268	ND		ug/kg	40.3	--	1	A
PCBs, Total	ND		ug/kg	40.3	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	74		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	63		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-13  
 Client ID: TP-9 6-9'  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-9  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/22/20 00:22  
 Analyst: KB  
 Percent Solids: 91%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.6	--	1	A
Aroclor 1221	ND		ug/kg	35.6	--	1	A
Aroclor 1232	ND		ug/kg	35.6	--	1	A
Aroclor 1242	ND		ug/kg	35.6	--	1	A
Aroclor 1248	ND		ug/kg	35.6	--	1	A
Aroclor 1254	ND		ug/kg	35.6	--	1	A
Aroclor 1260	ND		ug/kg	35.6	--	1	A
Aroclor 1262	ND		ug/kg	35.6	--	1	A
Aroclor 1268	ND		ug/kg	35.6	--	1	A
PCBs, Total	ND		ug/kg	35.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	68		30-150	B
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	60		30-150	A



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-14  
 Client ID: TP-9A  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-9  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/22/20 00:34  
 Analyst: KB  
 Percent Solids: 91%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.7	--	1	A
Aroclor 1221	ND		ug/kg	35.7	--	1	A
Aroclor 1232	ND		ug/kg	35.7	--	1	A
Aroclor 1242	ND		ug/kg	35.7	--	1	A
Aroclor 1248	ND		ug/kg	35.7	--	1	A
Aroclor 1254	ND		ug/kg	35.7	--	1	B
Aroclor 1260	ND		ug/kg	35.7	--	1	B
Aroclor 1262	ND		ug/kg	35.7	--	1	A
Aroclor 1268	ND		ug/kg	35.7	--	1	A
PCBs, Total	ND		ug/kg	35.7	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	76		30-150	B
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	69		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-15  
 Client ID: TP-10  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/22/20 00:46  
 Analyst: KB  
 Percent Solids: 79%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	40.8	--	1	A
Aroclor 1221	ND		ug/kg	40.8	--	1	A
Aroclor 1232	ND		ug/kg	40.8	--	1	A
Aroclor 1242	ND		ug/kg	40.8	--	1	A
Aroclor 1248	ND		ug/kg	40.8	--	1	A
Aroclor 1254	ND		ug/kg	40.8	--	1	B
Aroclor 1260	ND		ug/kg	40.8	--	1	B
Aroclor 1262	ND		ug/kg	40.8	--	1	A
Aroclor 1268	ND		ug/kg	40.8	--	1	A
PCBs, Total	ND		ug/kg	40.8	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	76		30-150	B
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	72		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-17  
 Client ID: TP-11  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 6-12  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/22/20 00:59  
 Analyst: KB  
 Percent Solids: 87%

Extraction Method: EPA 3546  
 Extraction Date: 02/21/20 01:04  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.2	--	1	A
Aroclor 1221	ND		ug/kg	37.2	--	1	A
Aroclor 1232	ND		ug/kg	37.2	--	1	A
Aroclor 1242	ND		ug/kg	37.2	--	1	A
Aroclor 1248	ND		ug/kg	37.2	--	1	A
Aroclor 1254	ND		ug/kg	37.2	--	1	A
Aroclor 1260	ND		ug/kg	37.2	--	1	A
Aroclor 1262	ND		ug/kg	37.2	--	1	A
Aroclor 1268	ND		ug/kg	37.2	--	1	A
PCBs, Total	ND		ug/kg	37.2	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	B
Decachlorobiphenyl	53		30-150	B
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	50		30-150	A

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 15:43  
 Analyst: KB

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 14:19  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/20/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/20/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 04,06,08,11,13-15,17 Batch: WG1342785-1						
Aroclor 1016	ND		ug/kg	32.6	--	A
Aroclor 1221	ND		ug/kg	32.6	--	A
Aroclor 1232	ND		ug/kg	32.6	--	A
Aroclor 1242	ND		ug/kg	32.6	--	A
Aroclor 1248	ND		ug/kg	32.6	--	A
Aroclor 1254	ND		ug/kg	32.6	--	A
Aroclor 1260	ND		ug/kg	32.6	--	A
Aroclor 1262	ND		ug/kg	32.6	--	A
Aroclor 1268	ND		ug/kg	32.6	--	A
PCBs, Total	ND		ug/kg	32.6	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	91		30-150	B
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	79		30-150	A

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 04,06,08,11,13-15,17 Batch: WG1342785-2 WG1342785-3									
Aroclor 1016	66		43		40-140	42	Q	30	A
Aroclor 1260	63		42		40-140	40	Q	30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		41		30-150	B
Decachlorobiphenyl	66		45		30-150	B
2,4,5,6-Tetrachloro-m-xylene	63		42		30-150	A
Decachlorobiphenyl	62		42		30-150	A

## **METALS**

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-04

Date Collected: 02/18/20 14:00

Client ID: TP-4

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	1.56		mg/kg	0.473	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC
Barium, Total	11.7		mg/kg	0.473	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.473	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC
Chromium, Total	9.96		mg/kg	0.473	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC
Lead, Total	4.14		mg/kg	2.36	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.089	--	1	02/22/20 06:00	02/22/20 14:24	EPA 7471B	97,7471B	AL
Selenium, Total	ND		mg/kg	2.36	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.473	--	1	02/21/20 20:14	02/24/20 21:31	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-06

Date Collected: 02/19/20 14:00

Client ID: TP-5

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	0.987		mg/kg	0.446	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC
Barium, Total	14.4		mg/kg	0.446	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.446	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC
Chromium, Total	9.11		mg/kg	0.446	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC
Lead, Total	3.32		mg/kg	2.23	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.085	--	1	02/22/20 06:00	02/22/20 14:25	EPA 7471B	97,7471B	AL
Selenium, Total	ND		mg/kg	2.23	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.446	--	1	02/21/20 20:14	02/24/20 21:50	EPA 3050B	97,6010D	LC





**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-08

Date Collected: 02/19/20 14:00

Client ID: TP-6

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	ND		mg/kg	0.439	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC
Barium, Total	17.0		mg/kg	0.439	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.439	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC
Chromium, Total	7.78		mg/kg	0.439	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC
Lead, Total	2.43		mg/kg	2.19	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.083	--	1	02/22/20 06:00	02/22/20 14:31	EPA 7471B	97,7471B	AL
Selenium, Total	ND		mg/kg	2.19	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.439	--	1	02/21/20 20:14	02/24/20 21:54	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-11

Date Collected: 02/18/20 14:00

Client ID: TP-7

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	1.85		mg/kg	0.371	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC
Barium, Total	13.1		mg/kg	0.371	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.371	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC
Chromium, Total	9.67		mg/kg	0.371	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC
Lead, Total	4.57		mg/kg	1.86	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.090	--	1	02/22/20 06:00	02/22/20 14:32	EPA 7471B	97,7471B	AL
Selenium, Total	ND		mg/kg	1.86	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.371	--	1	02/21/20 20:14	02/24/20 21:59	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-15

Date Collected: 02/18/20 14:00

Client ID: TP-10

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	3.45		mg/kg	0.424	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC
Barium, Total	12.9		mg/kg	0.424	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.424	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC
Chromium, Total	10.1		mg/kg	0.424	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC
Lead, Total	8.65		mg/kg	2.12	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.093	--	1	02/22/20 06:00	02/22/20 14:34	EPA 7471B	97,7471B	AL
Selenium, Total	ND		mg/kg	2.12	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.424	--	1	02/21/20 20:14	02/24/20 22:03	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**SAMPLE RESULTS**

Lab ID: L2007468-17

Date Collected: 02/19/20 14:00

Client ID: TP-11

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	3.74		mg/kg	0.370	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC
Barium, Total	12.8		mg/kg	0.370	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.370	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC
Chromium, Total	10.1		mg/kg	0.370	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC
Lead, Total	5.11		mg/kg	1.85	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.084	--	1	02/22/20 06:00	02/22/20 14:36	EPA 7471B	97,7471B	AL
Selenium, Total	ND		mg/kg	1.85	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.370	--	1	02/21/20 20:14	02/24/20 22:08	EPA 3050B	97,6010D	LC



Project Name: CAMBRIA HOTEL

Lab Number: L2007468

Project Number: 6735

Report Date: 02/25/20

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 04,06,08,11,15,17 Batch: WG1343169-1										
Arsenic, Total	ND		mg/kg	0.400	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC
Barium, Total	ND		mg/kg	0.400	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC
Chromium, Total	ND		mg/kg	0.400	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC
Lead, Total	ND		mg/kg	2.00	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC
Selenium, Total	ND		mg/kg	2.00	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC
Silver, Total	ND		mg/kg	0.400	--	1	02/21/20 20:14	02/24/20 20:03	97,6010D	LC

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 04,06,08,11,15,17 Batch: WG1343209-1										
Mercury, Total	ND		mg/kg	0.040	--	1	02/22/20 06:00	02/22/20 14:13	97,7471B	AL

### Prep Information

Digestion Method: EPA 7471B

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1343169-2 WG1343169-3 SRM Lot Number: D105-540								
Arsenic, Total	107		109		70-130	2		30
Barium, Total	103		106		75-125	3		30
Cadmium, Total	96		102		75-125	6		30
Chromium, Total	98		100		70-130	2		30
Lead, Total	106		99		71-128	7		30
Selenium, Total	102		104		63-137	2		30
Silver, Total	102		104		69-131	2		30

MCP Total Metals - Mansfield Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1343209-2 WG1343209-3 SRM Lot Number: D105-540								
Mercury, Total	96		99		60-141	3		30

# **INORGANICS & MISCELLANEOUS**

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### SAMPLE RESULTS

**Lab ID:** L2007468-04  
**Client ID:** TP-4  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/24/20 08:42	1,1030	MV





**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### SAMPLE RESULTS

**Lab ID:** L2007468-06  
**Client ID:** TP-5  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/19/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/24/20 08:42	1,1030	MV



**Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007468**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-08**Client ID:** TP-6**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Date Collected:** 02/19/20 14:00**Date Received:** 02/19/20**Field Prep:** Not Specified**Sample Depth:** 6-12**Matrix:** Fill**Test Material Information****Source of Material:** Unknown**Description of Material:** Non-Metallic - Damp Soil**Particle Size:** Medium**Preliminary Burning Time (sec):** 120

<b>Parameter</b>	<b>Result</b>	<b>Date Analyzed</b>	<b>Analytical Method</b>	<b>Analyst</b>
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/24/20 08:42	1,1030	MV



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### SAMPLE RESULTS

**Lab ID:** L2007468-11  
**Client ID:** TP-7  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Wet Sand  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/24/20 08:42	1,1030	MV



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

**SAMPLE RESULTS**

Lab ID: L2007468-15

Client ID: TP-10

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

**Test Material Information**

Source of Material: Unknown

Description of Material: Non-Metallic - Wet Sand

Particle Size: Medium

Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/24/20 08:42	1,1030	MV



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

### SAMPLE RESULTS

**Lab ID:** L2007468-17  
**Client ID:** TP-11  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/19/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 6-12  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Wet Sand  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/24/20 08:42	1,1030	MV



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-04

Client ID: TP-4

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	02/20/20 03:42	1,9050A	CB
Solids, Total	83.3		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI
pH (H)	6.6		SU	-	NA	1	-	02/20/20 01:49	1,9045D	CB
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:33	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:21	125,7.3	KF



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-05

Client ID: TP-4, S-4

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-8

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.4		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-06

Client ID: TP-5

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	19		umhos/cm	10	--	1	-	02/20/20 03:42	1,9050A	CB
Solids, Total	87.5		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI
pH (H)	5.8		SU	-	NA	1	-	02/20/20 01:49	1,9045D	CB
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:33	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:21	125,7.3	KF





Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-07

Client ID: TP-5, S-6

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 10-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.5		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-08

Client ID: TP-6

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	ND		umhos/cm	10	--	1	-	02/20/20 03:42	1,9050A	CB
Solids, Total	87.9		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI
pH (H)	6.9		SU	-	NA	1	-	02/20/20 01:49	1,9045D	CB
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:33	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:21	125,7.3	KF



**Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007468**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-09**Client ID:** TP-6, S-4**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Date Collected:** 02/19/20 14:00**Date Received:** 02/19/20**Field Prep:** Not Specified**Sample Depth:** 6-8**Matrix:** Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.3		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-10

Client ID: TP-9 3-6'

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 3-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.6		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-11

Client ID: TP-7

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	12		umhos/cm	10	--	1	-	02/20/20 03:42	1,9050A	CB
Solids, Total	81.6		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI
pH (H)	7.4		SU	-	NA	1	-	02/20/20 01:49	1,9045D	CB
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:22	125,7.3	KF



**Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007468**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-12**Client ID:** TP-7, S-6**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Date Collected:** 02/18/20 14:00**Date Received:** 02/20/20**Field Prep:** Not Specified**Sample Depth:** 10-12**Matrix:** Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.9		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

**SAMPLE RESULTS**

Lab ID: L2007468-13

Client ID: TP-9 6-9'

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-9

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.7		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



**Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007468**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-14**Client ID:** TP-9A**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Date Collected:** 02/19/20 14:00**Date Received:** 02/19/20**Field Prep:** Not Specified**Sample Depth:** 6-9**Matrix:** Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.0		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI





Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-15

Client ID: TP-10

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	24		umhos/cm	10	--	1	-	02/20/20 03:42	1,9050A	CB
Solids, Total	79.0		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI
pH (H)	7.7		SU	-	NA	1	-	02/20/20 01:49	1,9045D	CB
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:22	125,7.3	KF



**Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007468**Report Date:** 02/25/20**SAMPLE RESULTS****Lab ID:** L2007468-16**Client ID:** TP-10, S-6**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Date Collected:** 02/18/20 14:00**Date Received:** 02/20/20**Field Prep:** Not Specified**Sample Depth:** 10-12**Matrix:** Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.7		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

## SAMPLE RESULTS

Lab ID: L2007468-17

Client ID: TP-11

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	14		umhos/cm	10	--	1	-	02/20/20 03:42	1,9050A	CB
Solids, Total	86.8		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI
pH (H)	7.6		SU	-	NA	1	-	02/20/20 01:49	1,9045D	CB
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:22	125,7.3	KF



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

**SAMPLE RESULTS**

Lab ID: L2007468-18

Client ID: TP-11, S-4

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 6-8

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.3		%	0.100	NA	1	-	02/20/20 14:39	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

**SAMPLE RESULTS**

Lab ID: L2007468-19

Client ID: TP-9, S-3

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/20/20

Field Prep: Not Specified

Sample Depth: 10-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.2		%	0.100	NA	1	-	02/22/20 10:07	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

**SAMPLE RESULTS**

Lab ID: L2007468-20

Client ID: TP-8, S-6

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/20/20

Field Prep: Not Specified

Sample Depth: 10-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.2		%	0.100	NA	1	-	02/22/20 10:07	121,2540G	RI



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 04,06,08,11,15,17 Batch: WG1342487-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:20	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 04,06,08,11,15,17 Batch: WG1342489-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:27	125,7.3	KF

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007468

**Report Date:** 02/25/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342486-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342487-2								
Sulfide, Reactive	105		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342489-2								
Cyanide, Reactive	89		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11,15,17 Batch: WG1342498-1								
Specific Conductance	99		-		99-101	-		



# Lab Duplicate Analysis

*Batch Quality Control*

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007468

Report Date: 02/25/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11,15,17 QC Batch ID: WG1342486-2 QC Sample: L2007468-04 Client ID: TP-4						
pH (H)	6.6	6.7	SU	2		5
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11,15,17 QC Batch ID: WG1342498-2 QC Sample: L2007468-04 Client ID: TP-4						
Specific Conductance @ 25 C	ND	ND	umhos/cm	NC		20
General Chemistry - Westborough Lab Associated sample(s): 04-18 QC Batch ID: WG1342657-1 QC Sample: L2007468-04 Client ID: TP-4						
Solids, Total	83.3	83.7	%	0		20

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent
B	Absent
C	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2007468-01A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		SUB-ASBESTOS()
L2007468-02A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		SUB-ASBESTOS()
L2007468-03A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		SUB-ASBESTOS()
L2007468-04A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-7471T-10(28),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007468-04B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-8082-10(365),REACTS(14),IGNIT-1030(14),MCP-8270-10(14),TS(7),PH-9045(1),TPH-DRO-D(14),REACTCN(14),COND-9050(28)
L2007468-05A	Vial MeOH preserved	B	NA		4.8	Y	Absent		MCP-8260HLW-10(14)
L2007468-05B	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-05C	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-05D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007468-06A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007468-06B	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		IGNIT-1030(14),REACTS(14),MCP-8082-10(365),MCP-8270-10(14),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28)
L2007468-07A	Vial MeOH preserved	A	NA		2.7	Y	Absent		MCP-8260HLW-10(14)
L2007468-07B	Vial water preserved	A	NA		2.7	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-07C	Vial water preserved	A	NA		2.7	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Serial\_No:** 02252015:55  
**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2007468-07D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2007468-08A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-7471T-10(28),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007468-08B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),MCP-8082-10(365),REACTS(14),MCP-8270-10(14),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28)
L2007468-09A	Vial MeOH preserved	B	NA		4.8	Y	Absent		MCP-8260HLW-10(14)
L2007468-09B	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-09C	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-09D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007468-10A	Glass 120ml/4oz unpreserved	A	NA		2.7	Y	Absent		TS(7),MCP-PAH-10(14)
L2007468-11A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007468-11B	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		MCP-8082-10(365),REACTS(14),IGNIT-1030(14),MCP-8270-10(14),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28)
L2007468-12A	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2007468-12B	Vial MeOH preserved	C	NA		2.3	Y	Absent		MCP-8260HLW-10(14)
L2007468-12C	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-12D	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-13A	Glass 120ml/4oz unpreserved	A	NA		2.7	Y	Absent		MCP-8082-10(365),TS(7)
L2007468-14A	Glass 120ml/4oz unpreserved	A	NA		2.7	Y	Absent		MCP-8082-10(365),TS(7)
L2007468-15A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007468-15B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),MCP-8082-10(365),REACTS(14),MCP-8270-10(14),TS(7),PH-9045(1),TPH-DRO-D(14),REACTCN(14),COND-9050(28)

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Serial\_No:** 02252015:55  
**Lab Number:** L2007468  
**Report Date:** 02/25/20

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2007468-16A	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007468-16B	Vial MeOH preserved	C	NA		2.3	Y	Absent		MCP-8260HLW-10(14)
L2007468-16C	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-16D	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-17A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-7471T-10(28),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007468-17B	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		IGNIT-1030(14),MCP-8082-10(365),REACTS(14),MCP-8270-10(14),TS(7),PH-9045(1),TPH-DRO-D(14),REACTCN(14),COND-9050(28)
L2007468-18A	Vial MeOH preserved	A	NA		2.7	Y	Absent		MCP-8260HLW-10(14)
L2007468-18B	Vial water preserved	A	NA		2.7	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-18C	Vial water preserved	A	NA		2.7	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-18D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2007468-19A	Vial MeOH preserved	C	NA		2.3	Y	Absent		VPH-DELUX-18(28)
L2007468-20A	Vial MeOH preserved	C	NA		2.3	Y	Absent		VPH-DELUX-18(28),MCP-8260HLW-10(14)
L2007468-20B	Vial MeOH preserved	C	NA		2.3	Y	Absent		VPH-DELUX-18(28),MCP-8260HLW-10(14)
L2007468-20C	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007468-20D	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

Report Format: Data Usability Report



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

**Report Format:** Data Usability Report



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007468**Project Number:** 6735**Report Date:** 02/25/20**Data Qualifiers**

than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.**RE** - Analytical results are from sample re-extraction.**S** - Analytical results are from modified screening analysis.

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007468  
**Report Date:** 02/25/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.
- 131 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, February 2018, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, June 1, 2018.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.





**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 16

Department: **Quality Assurance**

Published Date: 2/17/2020 10:46:05 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

## Certification Information

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The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg. **EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



5 Walkup Drive  
Westboro, MA 01581  
Tel: 508-898-9220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 2/19/20

ALPHA Job #: L2007468

**Project Information**

Project Name: Cambria Hotel

Project Location: 515 Somerville Ave, Somerville

Project #: 6735

Project Manager: C Foley

ALPHA Quote #:

**Report Information - Data Deliverables**

☒ ADEX ☐ EMAIL

**Billing Information**

☐ Same as Client info ☐ PO #:

**Client Information**

Client: McPhail Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: (617) 868-1420

Email: cfoley@McPhailgeo.com

Additional Project Information:

☒ Run TCLP (if triggered)

**Turn-Around Time**

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

**Regulatory Requirements & Project Information Requirements**

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods

☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☒ No NPDES RGP

☐ Other State / Fed Program Criteria

Soil Assessment Package IV (less VOC)	VOC: 8260	Total Solids	SVOC: PAH	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TOTAL METALS: <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14	DISSOLVED METALS: <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14	METALS: Total Sb, Be, Ni, Ti, V, Zn	<input type="checkbox"/> PCBs <input type="checkbox"/> Pesticides	RGP Section A Inorganics	ACM	SAMPLE INFO Filtration <input type="checkbox"/> Field <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do	TOTAL # BOTTLES
													1
													1
													1
													2
													4
													2
													2
													4
													1

Sample "Sample ID" Nomenclature: B-100, S-1

ALPHA Lab ID (Lab Use Only)	Sample ID	Sample		Collection		Sampler Initials
		Depth	Material	Date	Time	
08468-01	TP-1	3-7'	F	2/18/20	2:00	FAM
-02	TP-2	3-7'	F	2/18/20	2:00	PAM
-03	TP-3	3-7'	F	2/18/20	2:00	FAM
-04	TP-4	6-12'	F	2/18/20	2:00	MSD
-05	TP-4 S4	6-8'	F	2/18/20	2:00	MSD
-06	TP-5	6-12'	F	2/19/20	2:00	MB
-07	TP-5 S4	10'-12'	F	2/19/20	2:00	MB
-08	TP-6	6-12'	F	2/19/20	2:00	MB
-09	TP-6 S4	6-8'	F	2/19/20	2:00	MB
-10	TP-9	3-6'	F	2/19/20	2:00	MB

**Container Type**

A=Amber glass  
B=Bacteria cup  
C=Cube  
D=BOD bottle  
E=Encore  
G=Glass  
O=Other  
P=Plastic  
V=Vial

**Sample Material**

F=Fill S=Sand  
O=Organics C=Clay  
N=Natural T=Till  
GM=Glaciomarine  
GW=Groundwater

**Preservative**

A=None  
B=HCl  
C=HNO<sub>3</sub>  
D=H<sub>2</sub>SO<sub>4</sub>  
E=NaOH  
F=MeOH  
G=NaHSO<sub>4</sub>  
H=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I=Ascorbic Acid  
J=NH<sub>4</sub>Cl  
K=Zn Acetate  
O=Other

**RGP Section A Inorganics:**  
Ammonia, Chloride, TRC, TSS, CrVI, CrIII, Total  
Cyanide, Total RGP Metals

**Relinquished By:**  
Ian Neuman  
McPhail Associates secure sample storage for  
laboratory pick-up

**Date/Time:**  
2/19/20 3:40


**Received By:**  
McPhail Associates secure sample storage for laboratory  
pick-up

**Date/Time:**  
2/19/20 3:40

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

DOC ID: 25188 Rev 0 (11/28/2017)



CHAIN OF CUSTODY		PAGE <u>2</u> OF <u>2</u>	
 <p>8 Walkup Drive Westboro, MA 01581 Tel: 508-898-9220</p> <p>320 Forbes Blvd Mansfield, MA 02048 Tel: 508-822-9300</p>		<b>Project Information</b> Project Name: <u>Cambria Hotel</u> Project Location: <u>915 Somerville Ave, Somerville, MA</u> Project #: <u>6735</u> Project Manager: <u>C. Foley</u> ALPHA Quote #: _____	
		<b>Date Rec'd in Lab:</b> <u>2/19/20</u> <b>Report Information - Data Deliverables</b> <input checked="" type="checkbox"/> ADEx <input type="checkbox"/> EMAIL <b>Billing Information</b> ALPHA Job #: <u>2007488</u> <input type="checkbox"/> Same as Client info    PO #: _____	
<b>Client Information</b> Client: <u>McPhail Associates, LLC</u> Address: <u>2269 Massachusetts Avenue</u> <u>Cambridge, MA 02140</u> Phone: <u>(617) 868-1420</u> Email: <u>cfoley@McPhailgeo.com</u>		<b>Regulatory Requirements &amp; Project Information Requirements</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MA MCP Analytical Methods <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No CT RCP Analytical Methods <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Matrix Spike Required on this SDG? (Required for MCP Inorganics) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No GW1 Standards (Info Required for Metals & EPH with Targets) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No NPDES RGP <input type="checkbox"/> Other State /Fed. Program _____ Criteria: _____	
<b>Additional Project Information:</b> <input checked="" type="checkbox"/> Run TCLP (if triggered)		<b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved!) <b>Date Due:</b> _____	
<b>Sample "Sample ID" Nomenclature: B-100, S-1</b>			
ALPHA Lab ID (Lab Use Only)	Sample ID	Sample Depth    Material Collection Date    Time Sampler Initials	Soil Assessment Package IV (less VOC) VOC: <input checked="" type="checkbox"/> 2260 Total Solids SVOC: <input type="checkbox"/> PAH EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only TOTAL METALS: <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14 DISSOLVED METALS: <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14 METALS: Total Sb, Ba, Ni, Ti, V, Zn <input checked="" type="checkbox"/> PCBs <input type="checkbox"/> Pesticides RGP Section A Inorganics <u>TCLP Pb</u>
07468-11	TP-7	6-12' F 2/18/20 2:00 IMB	X
-12	TP-7 S6	10-12' F 2/18/20 2:00 IMB	X X
-13	TP-9	6-9' F 2/18/20 2:00 IMB	
-14	TP-9A	6-9' F 2/17/20 2:00 IMB	
-15	TP-10	6-12' F 2/18/20 2:00 IMB	X
-16	TP-10 S6	10-12' F 2/18/20 2:00 IMB	X X
-17	TP-11	6-12' F 2/19/20 2:00 IMB	X
-18	TP-11 S4	6-8' F 2/19/20 2:00 IMB	X X
<del>TP-11 S4 6-8' F 2/19/20 2:00 IMB</del>			
<b>Container Type</b> A=Amber glass B=Acrylic cup C=Cube D=BOD bottle E=Encore G=Glass O=Other P=Plastic V=Vial <b>Sample Material</b> F=Fill    S=Sand O=Organics    C=Clay N=Natural    T=Till GM=Glaciomarine GW=Groundwater		<b>Preservative</b> A=None B=HCl C=HNO <sub>3</sub> D=H <sub>2</sub> SO <sub>4</sub> E=NaOH F=MeOH G=NaHSO <sub>4</sub> H=Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> I=Ascorbic Acid J=NH <sub>4</sub> Cl K=Zn Acetate O=Other	
<b>RGP Section A Inorganics:</b> Ammonia, Chloride, TRC, TSS, CrVI, CrIII, Total Cyanide, Total RGP Metals		<b>Container Type</b> <u>A N P</u> <b>Preservative</b> <u>A P F A</u>	
<b>Relinquished By:</b> <u>Ian Beckman</u> McPhail Associates secure sample storage for laboratory pick-up <u>2/19/20 1800</u>		<b>Received By:</b> <u>McPhail Associates secure sample storage for laboratory pick-up</u> <u>2/19/20 3:40</u> <u>2/19/20 1600</u> <u>2/19/20 1650</u>	
<b>Sample Comments</b> All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. DOC ID: 25188 Rev 0 (11/28/2017)			



## PAGE \_\_\_\_\_ OF \_\_\_\_\_

21212

L2007468

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

[illegible]

☒ Standard ☐ RUSH (only confirmed if pre-approved!)  
Date Due:

[illegible]

DOC ID: 25188 Rev 0  
(11/28/2017)

**Method Blank Summary**  
**Form 4**  
**Volatiles**

<b>Client</b>	<b>: McPhail Associates</b>	<b>Lab Number</b>	<b>: L2007468</b>
<b>Project Name</b>	<b>: CAMBRIA HOTEL</b>	<b>Project Number</b>	<b>: 6735</b>
<b>Lab Sample ID</b>	<b>: WG1343218-5</b>	<b>Lab File ID</b>	<b>: V04200221A04</b>
<b>Instrument ID</b>	<b>: VOA104</b>		
<b>Matrix</b>	<b>: SOIL</b>	<b>Analysis Date</b>	<b>: 02/21/20 07:32</b>

<b>Client Sample No.</b>	<b>Lab Sample ID</b>	<b>Analysis Date</b>
WG1343218-3LCS	WG1343218-3	02/21/20 05:59
WG1343218-4LCSD	WG1343218-4	02/21/20 06:30
TP-10, S-6	L2007468-16	02/21/20 08:38
TP-7, S-6	L2007468-12D	02/21/20 17:29

# Method Blank Summary

## Form 4

### Volatiles

<b>Client</b>	<b>: McPhail Associates</b>	<b>Lab Number</b>	<b>: L2007468</b>
<b>Project Name</b>	<b>: CAMBRIA HOTEL</b>	<b>Project Number</b>	<b>: 6735</b>
<b>Lab Sample ID</b>	<b>: WG1343220-5</b>	<b>Lab File ID</b>	<b>: V04200221A04</b>
<b>Instrument ID</b>	<b>: VOA104</b>		
<b>Matrix</b>	<b>: SOIL</b>	<b>Analysis Date</b>	<b>: 02/21/20 07:32</b>

Client Sample No.	Lab Sample ID	Analysis Date
WG1343220-3LCS	WG1343220-3	02/21/20 05:59
WG1343220-4LCSD	WG1343220-4	02/21/20 06:30
TP-8, S-6	L2007468-20	02/21/20 09:11
TP-4, S-4	L2007468-05	02/21/20 09:42
TP-5, S-6	L2007468-07	02/21/20 10:11
TP-6, S-4	L2007468-09	02/21/20 10:41
TP-11, S-4	L2007468-18	02/21/20 11:10

# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200221A01  
 Sample No : WG1343218-2  
 Channel :

Lab Number : L2007468  
 Project Number : 6735  
 Calibration Date : 02/21/20 05:59  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	104	0
Dichlorodifluoromethane	0.23	0.211	-	8.3	20	103	0
Chloromethane	0.315	0.318	-	-1	20	113	0
Vinyl chloride	0.29	0.272	-	6.2	20	104	0
Bromomethane	40	48.478	-	-21.2*	20	123	0
Chloroethane	0.16	0.162	-	-1.3	20	115	0
Trichlorofluoromethane	0.38	0.355	-	6.6	20	100	0
Ethyl ether	0.119	0.126	-	-5.9	20	111	0
1,1-Dichloroethene	0.244	0.248	-	-1.6	20	110	0
Carbon disulfide	0.817	0.765	-	6.4	20	108	0
Freon-113	0.258	0.25	-	3.1	20	103	0
Acrolein	0.027	0.027*	-	0	20	99	0
Methylene chloride	0.281	0.285	-	-1.4	20	113	0
Acetone	40	40.066	-	-0.2	20	111	0
trans-1,2-Dichloroethene	0.276	0.284	-	-2.9	20	112	0
Methyl acetate	0.123	0.124	-	-0.8	20	106	0
Methyl tert-butyl ether	0.622	0.639	-	-2.7	20	110	0
tert-Butyl alcohol	0.024	0.024*	-	0	20	108	0
Diisopropyl ether	0.947	0.979	-	-3.4	20	110	0
1,1-Dichloroethane	0.521	0.538	-	-3.3	20	112	0
Halothane	0.239	0.239	-	0	20	107	0
Acrylonitrile	0.053	0.057	-	-7.5	20	108	0
Ethyl tert-butyl ether	0.857	0.884	-	-3.2	20	110	0
Vinyl acetate	0.543	0.537	-	1.1	20	105	0
cis-1,2-Dichloroethene	0.299	0.316	-	-5.7	20	115	0
2,2-Dichloropropane	0.399	0.352	-	11.8	20	99	0
Bromochloromethane	0.15	0.156	-	-4	20	111	0
Cyclohexane	0.489	0.462	-	5.5	20	102	0
Chloroform	0.47	0.48	-	-2.1	20	112	0
Ethyl acetate	0.177	0.182	-	-2.8	20	107	0
Carbon tetrachloride	0.364	0.366	-	-0.5	20	101	0
Tetrahydrofuran	0.066	0.068	-	-3	20	108	0
Dibromofluoromethane	0.269	0.272	-	-1.1	20	103	0
1,1,1-Trichloroethane	0.435	0.409	-	6	20	106	0
2-Butanone	40	36.73	-	8.2	20	90	0
1,1-Dichloropropene	0.362	0.348	-	3.9	20	107	0
Benzene	1.074	1.046	-	2.6	20	111	0
tert-Amyl methyl ether	0.681	0.692	-	-1.6	20	109	0
1,2-Dichloroethane-d4	0.214	0.203	-	5.1	20	99	0
1,2-Dichloroethane	0.304	0.303	-	0.3	20	109	0
Methyl cyclohexane	0.454	0.423	-	6.8	20	101	0
Trichloroethene	0.298	0.285	-	4.4	20	109	0
Dibromomethane	0.149	0.153	-	-2.7	20	110	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200221A01  
 Sample No : WG1343218-2  
 Channel :

Lab Number : L2007468  
 Project Number : 6735  
 Calibration Date : 02/21/20 05:59  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.295	0.304	-	-3.1	20	111	0
2-Chloroethyl vinyl ether	0.061	0.054	-	11.5	20	100	0
Bromodichloromethane	0.365	0.358	-	1.9	20	107	0
1,4-Dioxane	0.00168	0.00203*	-	-20.8*	20	119	0
cis-1,3-Dichloropropene	0.425	0.411	-	3.3	20	104	0
Chlorobenzene-d5	1	1	-	0	20	121	0
Toluene-d8	1.246	1.136	-	8.8	20	110	0
Toluene	0.849	0.729	-	14.1	20	110	0
4-Methyl-2-pentanone	0.095	0.086*	-	9.5	20	108	0
Tetrachloroethene	0.42	0.342	-	18.6	20	107	0
trans-1,3-Dichloropropene	0.414	0.345	-	16.7	20	102	0
Ethyl methacrylate	0.33	0.288	-	12.7	20	107	0
1,1,2-Trichloroethane	0.216	0.189	-	12.5	20	111	0
Chlorodibromomethane	0.381	0.316	-	17.1	20	107	0
1,3-Dichloropropane	0.408	0.357	-	12.5	20	110	0
1,2-Dibromoethane	0.26	0.23	-	11.5	20	109	0
2-Hexanone	0.176	0.137	-	22.2*	20	103	0
Chlorobenzene	1.042	0.866	-	16.9	20	110	0
Ethylbenzene	1.595	1.367	-	14.3	20	108	0
1,1,1,2-Tetrachloroethane	0.389	0.324	-	16.7	20	109	0
p/m Xylene	0.66	0.543	-	17.7	20	108	0
o Xylene	0.653	0.538	-	17.6	20	109	0
Styrene	1.045	0.871	-	16.7	20	109	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	126	0
Bromoform	0.398	0.327	-	17.8	20	104	0
Isopropylbenzene	3.008	2.457	-	18.3	20	107	0
4-Bromofluorobenzene	0.855	0.837	-	2.1	20	122	0
Bromobenzene	0.795	0.662	-	16.7	20	110	0
n-Propylbenzene	3.461	2.81	-	18.8	20	106	0
1,4-Dichlorobutane	0.858	0.673	-	21.6*	20	106	0
1,1,2,2-Tetrachloroethane	0.598	0.472	-	21.1*	20	107	0
4-Ethyltoluene	3.031	2.486	-	18	20	106	0
2-Chlorotoluene	2.037	1.627	-	20.1*	20	106	0
1,3,5-Trimethylbenzene	2.545	2.056	-	19.2	20	108	0
1,2,3-Trichloropropane	0.413	0.334	-	19.1	20	107	0
trans-1,4-Dichloro-2-buten	0.129	0.1	-	22.5*	20	99	0
4-Chlorotoluene	2.081	1.664	-	20	20	106	0
tert-Butylbenzene	2.229	1.815	-	18.6	20	107	0
1,2,4-Trimethylbenzene	2.478	2.02	-	18.5	20	107	0
sec-Butylbenzene	3.304	2.633	-	20.3*	20	105	0
p-Isopropyltoluene	2.837	2.272	-	19.9	20	105	0
1,3-Dichlorobenzene	1.548	1.259	-	18.7	20	107	0
1,4-Dichlorobenzene	1.569	1.256	-	19.9	20	107	0

\* Value outside of QC limits.





# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200221A01  
 Sample No : WG1343218-2  
 Channel :

Lab Number : L2007468  
 Project Number : 6735  
 Calibration Date : 02/21/20 05:59  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.739	1.389	-	20.1*	20	105	0
n-Butylbenzene	2.44	1.892	-	22.5*	20	103	0
1,2-Dichlorobenzene	1.435	1.178	-	17.9	20	108	0
1,2,4,5-Tetramethylbenzene	2.788	2.281	-	18.2	20	106	0
1,2-Dibromo-3-chloropropan	0.103	0.085	-	17.5	20	105	0
1,3,5-Trichlorobenzene	1.151	0.921	-	20	20	104	0
Hexachlorobutadiene	0.548	0.436	-	20.4*	20	103	0
1,2,4-Trichlorobenzene	0.963	0.785	-	18.5	20	105	0
Naphthalene	1.879	1.566	-	16.7	20	109	0
1,2,3-Trichlorobenzene	0.862	0.718	-	16.7	20	108	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200221A01  
 Sample No : WG1343220-2  
 Channel :

Lab Number : L2007468  
 Project Number : 6735  
 Calibration Date : 02/21/20 05:59  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	104	0
Dichlorodifluoromethane	0.23	0.211	-	8.3	20	103	0
Chloromethane	0.315	0.318	-	-1	20	113	0
Vinyl chloride	0.29	0.272	-	6.2	20	104	0
Bromomethane	40	48.478	-	-21.2*	20	123	0
Chloroethane	0.16	0.162	-	-1.3	20	115	0
Trichlorofluoromethane	0.38	0.355	-	6.6	20	100	0
Ethyl ether	0.119	0.126	-	-5.9	20	111	0
1,1-Dichloroethene	0.244	0.248	-	-1.6	20	110	0
Carbon disulfide	0.817	0.765	-	6.4	20	108	0
Freon-113	0.258	0.25	-	3.1	20	103	0
Acrolein	0.027	0.027*	-	0	20	99	0
Methylene chloride	0.281	0.285	-	-1.4	20	113	0
Acetone	40	40.066	-	-0.2	20	111	0
trans-1,2-Dichloroethene	0.276	0.284	-	-2.9	20	112	0
Methyl acetate	0.123	0.124	-	-0.8	20	106	0
Methyl tert-butyl ether	0.622	0.639	-	-2.7	20	110	0
tert-Butyl alcohol	0.024	0.024*	-	0	20	108	0
Diisopropyl ether	0.947	0.979	-	-3.4	20	110	0
1,1-Dichloroethane	0.521	0.538	-	-3.3	20	112	0
Halothane	0.239	0.239	-	0	20	107	0
Acrylonitrile	0.053	0.057	-	-7.5	20	108	0
Ethyl tert-butyl ether	0.857	0.884	-	-3.2	20	110	0
Vinyl acetate	0.543	0.537	-	1.1	20	105	0
cis-1,2-Dichloroethene	0.299	0.316	-	-5.7	20	115	0
2,2-Dichloropropane	0.399	0.352	-	11.8	20	99	0
Bromochloromethane	0.15	0.156	-	-4	20	111	0
Cyclohexane	0.489	0.462	-	5.5	20	102	0
Chloroform	0.47	0.48	-	-2.1	20	112	0
Ethyl acetate	0.177	0.182	-	-2.8	20	107	0
Carbon tetrachloride	0.364	0.366	-	-0.5	20	101	0
Tetrahydrofuran	0.066	0.068	-	-3	20	108	0
Dibromofluoromethane	0.269	0.272	-	-1.1	20	103	0
1,1,1-Trichloroethane	0.435	0.409	-	6	20	106	0
2-Butanone	40	36.73	-	8.2	20	90	0
1,1-Dichloropropene	0.362	0.348	-	3.9	20	107	0
Benzene	1.074	1.046	-	2.6	20	111	0
tert-Amyl methyl ether	0.681	0.692	-	-1.6	20	109	0
1,2-Dichloroethane-d4	0.214	0.203	-	5.1	20	99	0
1,2-Dichloroethane	0.304	0.303	-	0.3	20	109	0
Methyl cyclohexane	0.454	0.423	-	6.8	20	101	0
Trichloroethene	0.298	0.285	-	4.4	20	109	0
Dibromomethane	0.149	0.153	-	-2.7	20	110	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200221A01  
 Sample No : WG1343220-2  
 Channel :

Lab Number : L2007468  
 Project Number : 6735  
 Calibration Date : 02/21/20 05:59  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.295	0.304	-	-3.1	20	111	0
2-Chloroethyl vinyl ether	0.061	0.054	-	11.5	20	100	0
Bromodichloromethane	0.365	0.358	-	1.9	20	107	0
1,4-Dioxane	0.00168	0.00203*	-	-20.8*	20	119	0
cis-1,3-Dichloropropene	0.425	0.411	-	3.3	20	104	0
Chlorobenzene-d5	1	1	-	0	20	121	0
Toluene-d8	1.246	1.136	-	8.8	20	110	0
Toluene	0.849	0.729	-	14.1	20	110	0
4-Methyl-2-pentanone	0.095	0.086*	-	9.5	20	108	0
Tetrachloroethene	0.42	0.342	-	18.6	20	107	0
trans-1,3-Dichloropropene	0.414	0.345	-	16.7	20	102	0
Ethyl methacrylate	0.33	0.288	-	12.7	20	107	0
1,1,2-Trichloroethane	0.216	0.189	-	12.5	20	111	0
Chlorodibromomethane	0.381	0.316	-	17.1	20	107	0
1,3-Dichloropropane	0.408	0.357	-	12.5	20	110	0
1,2-Dibromoethane	0.26	0.23	-	11.5	20	109	0
2-Hexanone	0.176	0.137	-	22.2*	20	103	0
Chlorobenzene	1.042	0.866	-	16.9	20	110	0
Ethylbenzene	1.595	1.367	-	14.3	20	108	0
1,1,1,2-Tetrachloroethane	0.389	0.324	-	16.7	20	109	0
p/m Xylene	0.66	0.543	-	17.7	20	108	0
o Xylene	0.653	0.538	-	17.6	20	109	0
Styrene	1.045	0.871	-	16.7	20	109	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	126	0
Bromoform	0.398	0.327	-	17.8	20	104	0
Isopropylbenzene	3.008	2.457	-	18.3	20	107	0
4-Bromofluorobenzene	0.855	0.837	-	2.1	20	122	0
Bromobenzene	0.795	0.662	-	16.7	20	110	0
n-Propylbenzene	3.461	2.81	-	18.8	20	106	0
1,4-Dichlorobutane	0.858	0.673	-	21.6*	20	106	0
1,1,2,2-Tetrachloroethane	0.598	0.472	-	21.1*	20	107	0
4-Ethyltoluene	3.031	2.486	-	18	20	106	0
2-Chlorotoluene	2.037	1.627	-	20.1*	20	106	0
1,3,5-Trimethylbenzene	2.545	2.056	-	19.2	20	108	0
1,2,3-Trichloropropane	0.413	0.334	-	19.1	20	107	0
trans-1,4-Dichloro-2-buten	0.129	0.1	-	22.5*	20	99	0
4-Chlorotoluene	2.081	1.664	-	20	20	106	0
tert-Butylbenzene	2.229	1.815	-	18.6	20	107	0
1,2,4-Trimethylbenzene	2.478	2.02	-	18.5	20	107	0
sec-Butylbenzene	3.304	2.633	-	20.3*	20	105	0
p-Isopropyltoluene	2.837	2.272	-	19.9	20	105	0
1,3-Dichlorobenzene	1.548	1.259	-	18.7	20	107	0
1,4-Dichlorobenzene	1.569	1.256	-	19.9	20	107	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200221A01  
 Sample No : WG1343220-2  
 Channel :

Lab Number : L2007468  
 Project Number : 6735  
 Calibration Date : 02/21/20 05:59  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.739	1.389	-	20.1*	20	105	0
n-Butylbenzene	2.44	1.892	-	22.5*	20	103	0
1,2-Dichlorobenzene	1.435	1.178	-	17.9	20	108	0
1,2,4,5-Tetramethylbenzene	2.788	2.281	-	18.2	20	106	0
1,2-Dibromo-3-chloropropan	0.103	0.085	-	17.5	20	105	0
1,3,5-Trichlorobenzene	1.151	0.921	-	20	20	104	0
Hexachlorobutadiene	0.548	0.436	-	20.4*	20	103	0
1,2,4-Trichlorobenzene	0.963	0.785	-	18.5	20	105	0
Naphthalene	1.879	1.566	-	16.7	20	109	0
1,2,3-Trichlorobenzene	0.862	0.718	-	16.7	20	108	0

\* Value outside of QC limits.

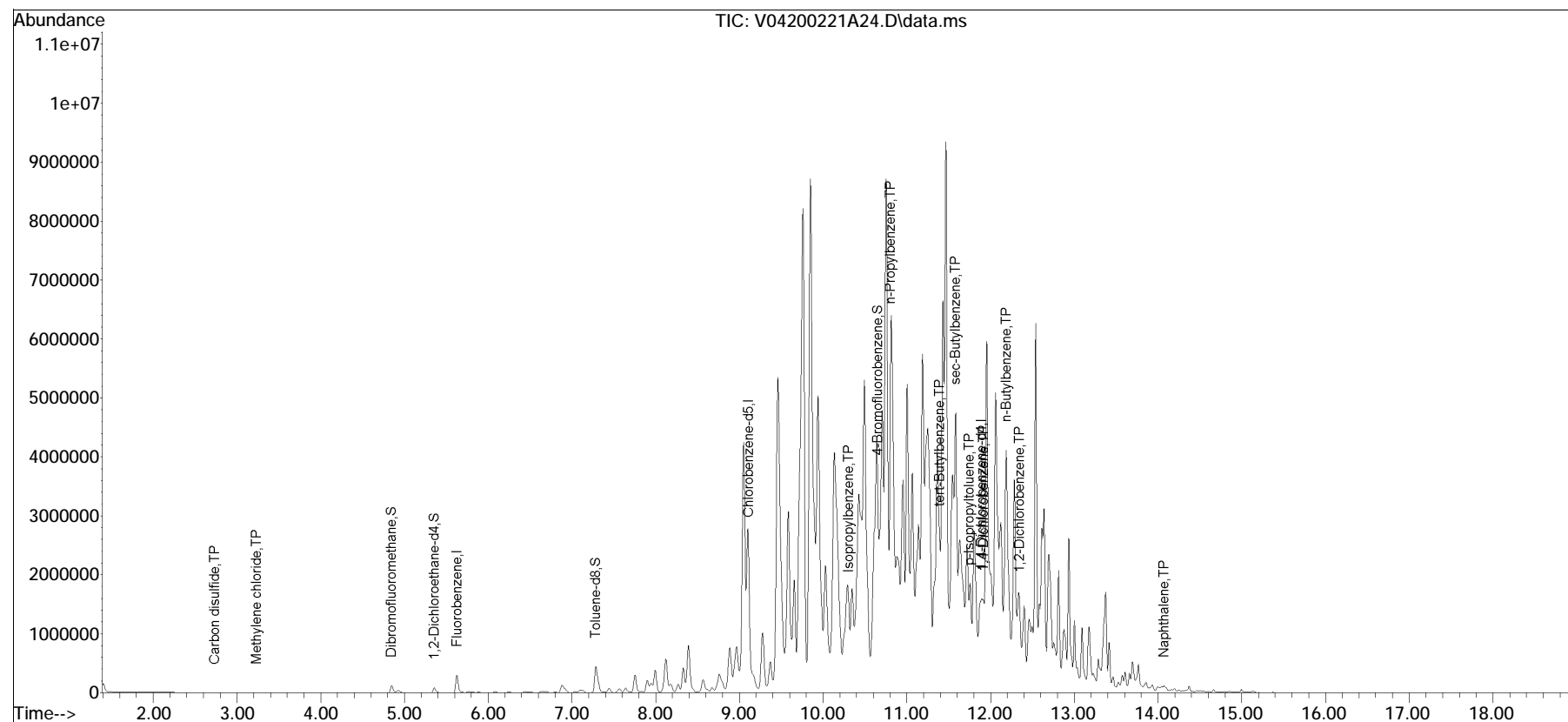


## Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA104\2020\200221A\  
Data File : V04200221A24.D  
Acq On : 21 Feb 2020 5:29 pm  
Operator : VOA104:MKS  
Sample : 12007468-12D,31H,13.95,15,0.010,,b  
Misc : WG1343218,ICAL16489  
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 21 18:12:20 2020  
Quant Method : I:\VOLATILES\VOA104\2020\200221A\V104\_200205A\_8260.m  
Quant Title : VOLATILES BY GC/MS  
QLast Update : Wed Feb 05 11:01:42 2020  
Response via : Initial Calibration

Sub List : 8260-MCP - REG- MCP LIST2020\200221A\V04200221A01.D•

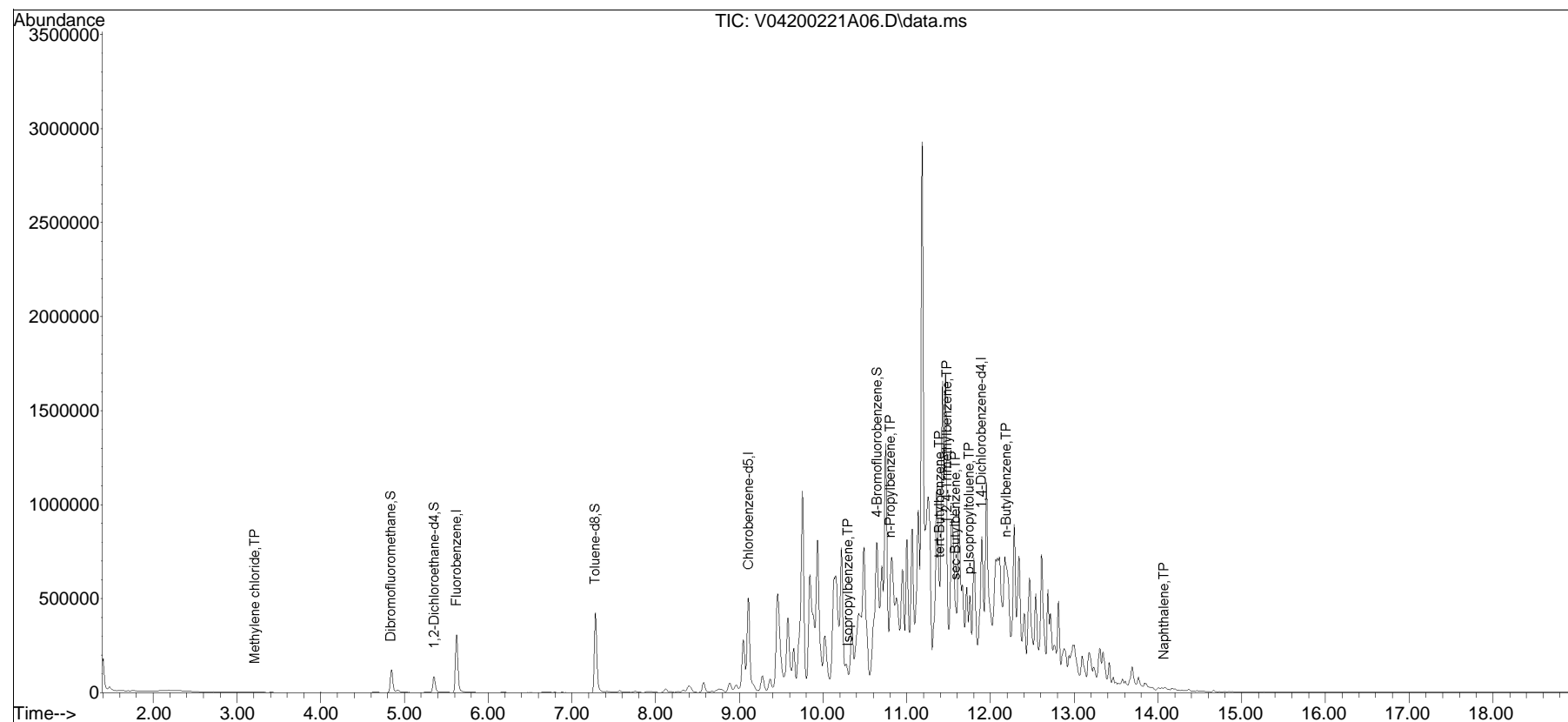


## Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA104\2020\200221A\  
Data File : V04200221A06.D  
Acq On : 21 Feb 2020 8:38 am  
Operator : VOA104:JC  
Sample : 12007468-16,31H,14.66,15,0.100,,b  
Misc : WG1343218,ICAL16489  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 21 13:19:51 2020  
Quant Method : I:\VOLATILES\VOA104\2020\200221A\V104\_200205A\_8260.m  
Quant Title : VOLATILES BY GC/MS  
QLast Update : Wed Feb 05 11:01:42 2020  
Response via : Initial Calibration

Sub List : 8260-MCP - REG- MCP LIST2020\200221A\V04200221A01.D•





# ProScience Analytical Services, Inc

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Melissa Gulli  
Alpha Analytical - Westborough  
Eight Walkup Drive  
Westborough, MA 01581

February 24, 2020

Dear Melissa Gulli,

The enclosed analytical results have been obtained using the EPA/600/R-93/116 method. Calibrated Visual Estimate (CVE) is used by ProScience for the determination of the percentage of asbestos and other components in the sample. The sample preparation technique used was in accordance with the US EPA office of Environmental Evaluation and Measurement - Region 1 requirements. This technique involves the elimination of interfering particles through the following steps: homogenization of the sample; separation of different fractions and examination under the stereomicroscope.

The quality control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client. As such, these results apply to the sample(s) as received.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested. This report may not be reproduced, except in its entirety, without the permission of ProScience Analytical Services, Inc., Laboratory Director.

If you have any questions please contact the Optical Manager or the Laboratory Director.

Sincerely,

A handwritten signature in black ink, appearing to read "Sophie Ken", is written over a horizontal line.

Sophetra Ken, Optical Asbestos Manager

Aimee Cormier, Laboratory Director

Enclosure:

LAB BATCH ID: S 120419 CLIENT PROJECT ID: L2007468

Client Ref: MA

CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; NVLAP Lab Code 200090-0; RI ID # AAL-093;

VT ID# AL016876

# ProScience Analytical Services, Inc.

Client #: 1497  
 Client Project: L2007468  
 Client Reference: MA  
 Client Name: Alpha Analytical - Westborough  
 Method: EPA/600/R-93/116; ENV.EVAL. and MEAS.- REGION 1 Requirements

**Batch: S 120419**  
 Date Sampled: 2/18/2020  
 Date Received: 2/20/2020  
 Date Analyzed: 2/24/2020  
 Date of Report: 2/24/2020

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
TP-1	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Soil Location: N/A Comments: Analyzed: Yes														

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
TP-2	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Soil Location: N/A Comments: Analyzed: Yes														

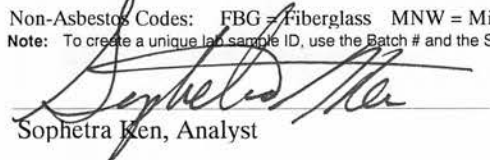
Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
TP-3	Multi	0	0	0	0	0	0	0	0	0	0	0	0	100
Description: Soil Location: N/A Comments: Analyzed: Yes														

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite

Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

\* All results are in percentage

  
 Sophetra Ken, Analyst



**Client Name:** Alpha Analytical - Westborough

Client Project #: L2007468

Client Reference: MA

**Batch:** 5 **120419**

Date Received: 2/20/2020

Date Due: 2/24/2020

Stop on first pos: Yes or No

**Batch: 120419**

Batch: 120419			Stereo Scope					Optical Properties					RI		Asbestos Percent					Non-Asbestos Percent							
Sample ID	Description	Analyst	SSAPE	Color	Homogeneity	Texture	Frable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Parallel	Perpendicular	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
TP-1	Soil	S.K.	✓	✓	✓	✓	✓																			100	
TP-2	Soil	S.K.	✓	✓	✓	✓	✓																			100	
TP-3	Soil	S.K.	✓	✓	✓	✓	✓																			100	

Analyzed By / Date:

*Signature*

QC By / Date:

*2/24/20*

Fax, (Email)

Verbal Results By / Date: H.W. mmv


*2/24/20*

# of Samples:

3

Comments:

*analyzed  
@ H.W.  
Stadron 1*

		<b>Subcontract Chain of Custody</b> ProScience Analytical Services 22 Cummings Park Woburn, MA 01801 <i>S120419</i>		<b>Alpha Job Number</b> L2007468	
<b>Client Information</b>		<b>Project Information</b>		<b>Regulatory Requirements/Report Limits</b>	
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019  Phone: 603.319.5010 Email: mgulli@alphalab.com		Project Location: MA Project Manager: Melissa Gulli  <b>Turnaround &amp; Deliverables Information</b> Due Date: 02/24/20 (RUSH) Deliverables:		State/Federal Program: Regulatory Criteria:	
<b>Project Specific Requirements and/or Report Requirements</b>					
Reference following Alpha Job Number on final report/deliverables: L2007468				Report to include Method Blank, LCS/LCSD:	
Additional Comments: Send all results/reports to subreports@alphalab.com					
Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	TP-1 TP-2 TP-3	02-18-20 14:00 02-18-20 14:00 02-18-20 14:00	Fill Fill Fill	Asbestos-PLM Asbestos-PLM Asbestos-PLM	
Relinquished By:		Date/Time:		Received By:	
<i>[Signature]</i>		2/20/20 0800		<i>[Signature]</i>	
<i>[Signature]</i>		2/20/20 1100		<i>[Signature]</i>	
<i>Rob Maceto Att 2/20/20</i>				<i>[Signature]</i>	
Form No: AL_subcoc				Date/Time: 2/20/20 12:17	



## ANALYTICAL REPORT

Lab Number:	L2007474
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	CAMBRIA HOTEL
Project Number:	6735
Report Date:	02/21/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

---

Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2007474-01	TP-6	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-02	TP-6, S-1	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-03	TP-9	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007474-04	TP-9A	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007474-05	TP-16	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-06	TP-11	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007474-07	TP-11, S-2	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/19/20 14:00	02/19/20
L2007474-08	TP-14 0-6'	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-09	TP-14, S-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/20/20
L2007474-10	TP-15	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-11	TP-15, S-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/20/20
L2007474-12	TP-16	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-13	TP-16, S-2	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/20/20
L2007474-14	TP-14 0-3'	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-15	SP-1, S-2	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-16	SP-1, S-3	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-17	SP-1, S-4	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20
L2007474-18	SP-1, S-5	FILL	515 SOMERVILLE AVE., SOMERVILLE	02/18/20 14:00	02/19/20

Project Name: CAMBRIA HOTEL

Lab Number: L2007474

Project Number: 6735

Report Date: 02/21/20

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### Case Narrative (continued)

#### MCP Related Narratives

##### Sample Receipt

L2007474-13: The sample identified as "TP -16 S1" on the chain of custody was identified as "TP-16 S2" on the container label. At the client's request, the sample is reported as "TP-16, S-2".

##### Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Total Metals.

#### Volatile Organics

The initial calibration, associated with L2007474-02, -07, -09, -11, and -13, utilized a quadratic fit for bromomethane.

In reference to question H:

The initial calibration, associated with L2007474-02, -07, -09, -11, and -13, did not meet the method required minimum response factor on the lowest calibration standard for 4-methyl-2-pentanone (0.0945) and 1,4-dioxane (0.0014), as well as the average response factor for 4-methyl-2-pentanone and 1,4-dioxane.

The continuing calibration standards, associated with L2007474-02, -07, -09, -11, and -13, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

#### Semivolatile Organics

L2007474-01 and -03: The sample has elevated detection limits due to the dilution required by the sample matrix.

In reference to question G:

L2007474-01, -10 and -12: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question I:

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### Case Narrative (continued)

L2007474-03: The sample was analyzed for a subset of MCP analytes per client request.

In reference to question H:

L2007474-10: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

### Total Metals

In reference to question I:

All samples were analyzed for a subset of MCP analytes per client request.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

*Melissa Sturgis* Melissa Sturgis

Title: Technical Director/Representative

Date: 02/21/20



# QC OUTLIER SUMMARY REPORT

**Project Name:** CAMBRIA HOTEL

**Lab Number:** L2007474

**Project Number:** 6735

**Report Date:** 02/21/20

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics by EPA 5035 Low - Westborough Lab								
8260C	Batch QC	WG1343024-3	Bromomethane	LCS	135	70-130	09,11,13	potential high bias
MCP Semivolatile Organics - Westborough Lab								
8270D	TP-15	L2007474-10 D	2-Fluorophenol	Surrogate	0	30-130	-	- - not applicable - -
8270D	TP-15	L2007474-10 D	Phenol-d6	Surrogate	0	30-130	-	- - not applicable - -
8270D	TP-15	L2007474-10 D	Nitrobenzene-d5	Surrogate	0	30-130	-	- - not applicable - -
8270D	TP-15	L2007474-10 D	2-Fluorobiphenyl	Surrogate	0	30-130	-	- - not applicable - -
8270D	TP-15	L2007474-10 D	2,4,6-Tribromophenol	Surrogate	0	30-130	-	- - not applicable - -
8270D	TP-15	L2007474-10 D	4-Terphenyl-d14	Surrogate	0	30-130	-	- - not applicable - -
8270D	Batch QC	WG1342499-3	2,4-Dinitrophenol	LCSD	23	30-130	01,06,08,10,12	potential low bias
8270D	Batch QC	WG1342499-3	2,4-Dinitrophenol	LCSD	56	30	01,06,08,10,12	non-directional bias
8270D	Batch QC	WG1342499-3	Pyridine	LCSD	33	30	01,06,08,10,12	non-directional bias

# ORGANICS

# **VOLATILES**

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-02  
 Client ID: TP-6, S-1  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-2  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 12:33  
 Analyst: NLK  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.2	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.6	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.52	--	1
Chlorobenzene	ND		ug/kg	0.52	--	1
Trichlorofluoromethane	ND		ug/kg	4.2	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.52	--	1
Bromodichloromethane	ND		ug/kg	0.52	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.52	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.52	--	1
1,1-Dichloropropene	ND		ug/kg	0.52	--	1
Bromoform	ND		ug/kg	4.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.52	--	1
Benzene	ND		ug/kg	0.52	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.2	--	1
Bromomethane	ND		ug/kg	2.1	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.1	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-02**Date Collected:** 02/18/20 14:00**Client ID:** TP-6, S-1**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 0-2

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.52	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	--	1
Methyl tert butyl ether	ND		ug/kg	2.1	--	1
p/m-Xylene	ND		ug/kg	2.1	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.1	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.1	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	10	--	1
Methyl ethyl ketone	ND		ug/kg	10	--	1
Methyl isobutyl ketone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Bromochloromethane	ND		ug/kg	2.1	--	1
Tetrahydrofuran	ND		ug/kg	4.2	--	1
2,2-Dichloropropane	ND		ug/kg	2.1	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,3-Dichloropropane	ND		ug/kg	2.1	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.52	--	1
Bromobenzene	ND		ug/kg	2.1	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.1	--	1
o-Chlorotoluene	ND		ug/kg	2.1	--	1
p-Chlorotoluene	ND		ug/kg	2.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	--	1
Hexachlorobutadiene	ND		ug/kg	4.2	--	1
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.2	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-02**Date Collected:** 02/18/20 14:00**Client ID:** TP-6, S-1**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 0-2

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	--	1
Diethyl ether	ND		ug/kg	2.1	--	1
Diisopropyl Ether	ND		ug/kg	2.1	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.1	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.1	--	1
1,4-Dioxane	ND		ug/kg	84	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	98		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-07  
 Client ID: TP-11, S-2  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 2-4  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 13:01  
 Analyst: NLK  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.2	--	1
Chloroform	ND		ug/kg	1.8	--	1
Carbon tetrachloride	ND		ug/kg	1.2	--	1
1,2-Dichloropropane	ND		ug/kg	1.2	--	1
Dibromochloromethane	ND		ug/kg	1.2	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	--	1
Tetrachloroethene	ND		ug/kg	0.60	--	1
Chlorobenzene	ND		ug/kg	0.60	--	1
Trichlorofluoromethane	ND		ug/kg	4.8	--	1
1,2-Dichloroethane	ND		ug/kg	1.2	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.60	--	1
Bromodichloromethane	ND		ug/kg	0.60	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.60	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.60	--	1
1,1-Dichloropropene	ND		ug/kg	0.60	--	1
Bromoform	ND		ug/kg	4.8	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.60	--	1
Benzene	ND		ug/kg	0.60	--	1
Toluene	ND		ug/kg	1.2	--	1
Ethylbenzene	ND		ug/kg	1.2	--	1
Chloromethane	ND		ug/kg	4.8	--	1
Bromomethane	ND		ug/kg	2.4	--	1
Vinyl chloride	ND		ug/kg	1.2	--	1
Chloroethane	ND		ug/kg	2.4	--	1
1,1-Dichloroethene	ND		ug/kg	1.2	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-07  
 Client ID: TP-11, S-2  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 2-4

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.60	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.4	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.4	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.4	--	1
Methyl tert butyl ether	ND		ug/kg	2.4	--	1
p/m-Xylene	ND		ug/kg	2.4	--	1
o-Xylene	ND		ug/kg	1.2	--	1
Xylenes, Total	ND		ug/kg	1.2	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	--	1
Dibromomethane	ND		ug/kg	2.4	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.4	--	1
Styrene	ND		ug/kg	1.2	--	1
Dichlorodifluoromethane	ND		ug/kg	12	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	12	--	1
Methyl ethyl ketone	ND		ug/kg	12	--	1
Methyl isobutyl ketone	ND		ug/kg	12	--	1
2-Hexanone	ND		ug/kg	12	--	1
Bromochloromethane	ND		ug/kg	2.4	--	1
Tetrahydrofuran	ND		ug/kg	4.8	--	1
2,2-Dichloropropane	ND		ug/kg	2.4	--	1
1,2-Dibromoethane	ND		ug/kg	1.2	--	1
1,3-Dichloropropane	ND		ug/kg	2.4	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.60	--	1
Bromobenzene	ND		ug/kg	2.4	--	1
n-Butylbenzene	ND		ug/kg	1.2	--	1
sec-Butylbenzene	ND		ug/kg	1.2	--	1
tert-Butylbenzene	ND		ug/kg	2.4	--	1
o-Chlorotoluene	ND		ug/kg	2.4	--	1
p-Chlorotoluene	ND		ug/kg	2.4	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.6	--	1
Hexachlorobutadiene	ND		ug/kg	4.8	--	1
Isopropylbenzene	ND		ug/kg	1.2	--	1
p-Isopropyltoluene	ND		ug/kg	1.2	--	1
Naphthalene	ND		ug/kg	4.8	--	1
n-Propylbenzene	ND		ug/kg	1.2	--	1



Project Name: CAMBRIA HOTEL

Lab Number: L2007474

Project Number: 6735

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-07

Date Collected: 02/19/20 14:00

Client ID: TP-11, S-2

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 2-4

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.4	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.4	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.4	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.4	--	1
Diethyl ether	ND		ug/kg	2.4	--	1
Diisopropyl Ether	ND		ug/kg	2.4	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.4	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.4	--	1
1,4-Dioxane	ND		ug/kg	96	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	98		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-09  
 Client ID: TP-14, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 5-6  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 20:10  
 Analyst: AD  
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.2	--	1
1,1-Dichloroethane	ND		ug/kg	1.2	--	1
Chloroform	ND		ug/kg	1.8	--	1
Carbon tetrachloride	ND		ug/kg	1.2	--	1
1,2-Dichloropropane	ND		ug/kg	1.2	--	1
Dibromochloromethane	ND		ug/kg	1.2	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	--	1
Tetrachloroethene	ND		ug/kg	0.62	--	1
Chlorobenzene	ND		ug/kg	0.62	--	1
Trichlorofluoromethane	ND		ug/kg	4.9	--	1
1,2-Dichloroethane	ND		ug/kg	1.2	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.62	--	1
Bromodichloromethane	ND		ug/kg	0.62	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.62	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.62	--	1
1,1-Dichloropropene	ND		ug/kg	0.62	--	1
Bromoform	ND		ug/kg	4.9	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.62	--	1
Benzene	ND		ug/kg	0.62	--	1
Toluene	ND		ug/kg	1.2	--	1
Ethylbenzene	ND		ug/kg	1.2	--	1
Chloromethane	ND		ug/kg	4.9	--	1
Bromomethane	ND		ug/kg	2.5	--	1
Vinyl chloride	ND		ug/kg	1.2	--	1
Chloroethane	ND		ug/kg	2.5	--	1
1,1-Dichloroethene	ND		ug/kg	1.2	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-09**Date Collected:** 02/18/20 14:00**Client ID:** TP-14, S-4**Date Received:** 02/20/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 5-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.62	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.5	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.5	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.5	--	1
Methyl tert butyl ether	ND		ug/kg	2.5	--	1
p/m-Xylene	ND		ug/kg	2.5	--	1
o-Xylene	ND		ug/kg	1.2	--	1
Xylenes, Total	ND		ug/kg	1.2	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	--	1
Dibromomethane	ND		ug/kg	2.5	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.5	--	1
Styrene	ND		ug/kg	1.2	--	1
Dichlorodifluoromethane	ND		ug/kg	12	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	12	--	1
Methyl ethyl ketone	ND		ug/kg	12	--	1
Methyl isobutyl ketone	ND		ug/kg	12	--	1
2-Hexanone	ND		ug/kg	12	--	1
Bromochloromethane	ND		ug/kg	2.5	--	1
Tetrahydrofuran	ND		ug/kg	4.9	--	1
2,2-Dichloropropane	ND		ug/kg	2.5	--	1
1,2-Dibromoethane	ND		ug/kg	1.2	--	1
1,3-Dichloropropane	ND		ug/kg	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.62	--	1
Bromobenzene	ND		ug/kg	2.5	--	1
n-Butylbenzene	ND		ug/kg	1.2	--	1
sec-Butylbenzene	ND		ug/kg	1.2	--	1
tert-Butylbenzene	ND		ug/kg	2.5	--	1
o-Chlorotoluene	ND		ug/kg	2.5	--	1
p-Chlorotoluene	ND		ug/kg	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.7	--	1
Hexachlorobutadiene	ND		ug/kg	4.9	--	1
Isopropylbenzene	ND		ug/kg	1.2	--	1
p-Isopropyltoluene	ND		ug/kg	1.2	--	1
Naphthalene	ND		ug/kg	4.9	--	1
n-Propylbenzene	ND		ug/kg	1.2	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-09**Date Collected:** 02/18/20 14:00**Client ID:** TP-14, S-4**Date Received:** 02/20/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 5-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.5	--	1
Diethyl ether	ND		ug/kg	2.5	--	1
Diisopropyl Ether	ND		ug/kg	2.5	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.5	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.5	--	1
1,4-Dioxane	ND		ug/kg	98	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	100		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-11  
 Client ID: TP-15, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 5-6  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 21:11  
 Analyst: MV  
 Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.8	--	1
1,1-Dichloroethane	ND		ug/kg	1.2	--	1
Chloroform	ND		ug/kg	1.7	--	1
Carbon tetrachloride	ND		ug/kg	1.2	--	1
1,2-Dichloropropane	ND		ug/kg	1.2	--	1
Dibromochloromethane	ND		ug/kg	1.2	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	--	1
Tetrachloroethene	ND		ug/kg	0.58	--	1
Chlorobenzene	ND		ug/kg	0.58	--	1
Trichlorofluoromethane	ND		ug/kg	4.6	--	1
1,2-Dichloroethane	ND		ug/kg	1.2	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.58	--	1
Bromodichloromethane	ND		ug/kg	0.58	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.58	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.58	--	1
1,1-Dichloropropene	ND		ug/kg	0.58	--	1
Bromoform	ND		ug/kg	4.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.58	--	1
Benzene	ND		ug/kg	0.58	--	1
Toluene	ND		ug/kg	1.2	--	1
Ethylbenzene	ND		ug/kg	1.2	--	1
Chloromethane	ND		ug/kg	4.6	--	1
Bromomethane	ND		ug/kg	2.3	--	1
Vinyl chloride	ND		ug/kg	1.2	--	1
Chloroethane	ND		ug/kg	2.3	--	1
1,1-Dichloroethene	ND		ug/kg	1.2	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-11  
 Client ID: TP-15, S-4  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 5-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.58	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	--	1
Methyl tert butyl ether	ND		ug/kg	2.3	--	1
p/m-Xylene	ND		ug/kg	2.3	--	1
o-Xylene	ND		ug/kg	1.2	--	1
Xylenes, Total	ND		ug/kg	1.2	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	--	1
Dibromomethane	ND		ug/kg	2.3	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.3	--	1
Styrene	ND		ug/kg	1.2	--	1
Dichlorodifluoromethane	ND		ug/kg	12	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	12	--	1
Methyl ethyl ketone	ND		ug/kg	12	--	1
Methyl isobutyl ketone	ND		ug/kg	12	--	1
2-Hexanone	ND		ug/kg	12	--	1
Bromochloromethane	ND		ug/kg	2.3	--	1
Tetrahydrofuran	ND		ug/kg	4.6	--	1
2,2-Dichloropropane	ND		ug/kg	2.3	--	1
1,2-Dibromoethane	ND		ug/kg	1.2	--	1
1,3-Dichloropropane	ND		ug/kg	2.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.58	--	1
Bromobenzene	ND		ug/kg	2.3	--	1
n-Butylbenzene	ND		ug/kg	1.2	--	1
sec-Butylbenzene	ND		ug/kg	1.2	--	1
tert-Butylbenzene	ND		ug/kg	2.3	--	1
o-Chlorotoluene	ND		ug/kg	2.3	--	1
p-Chlorotoluene	ND		ug/kg	2.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	--	1
Hexachlorobutadiene	ND		ug/kg	4.6	--	1
Isopropylbenzene	ND		ug/kg	1.2	--	1
p-Isopropyltoluene	ND		ug/kg	1.2	--	1
Naphthalene	ND		ug/kg	4.6	--	1
n-Propylbenzene	ND		ug/kg	1.2	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-11**Date Collected:** 02/18/20 14:00**Client ID:** TP-15, S-4**Date Received:** 02/20/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 5-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.3	--	1
Diethyl ether	ND		ug/kg	2.3	--	1
Diisopropyl Ether	ND		ug/kg	2.3	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.3	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.3	--	1
1,4-Dioxane	ND		ug/kg	92	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-13  
 Client ID: TP-16, S-2  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 12  
 Matrix: Fill  
 Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 21:43  
 Analyst: MV  
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	3.2	--	1
1,1-Dichloroethane	ND		ug/kg	0.64	--	1
Chloroform	ND		ug/kg	0.97	--	1
Carbon tetrachloride	ND		ug/kg	0.64	--	1
1,2-Dichloropropane	ND		ug/kg	0.64	--	1
Dibromochloromethane	ND		ug/kg	0.64	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.64	--	1
Tetrachloroethene	ND		ug/kg	0.32	--	1
Chlorobenzene	ND		ug/kg	0.32	--	1
Trichlorofluoromethane	ND		ug/kg	2.6	--	1
1,2-Dichloroethane	ND		ug/kg	0.64	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.32	--	1
Bromodichloromethane	ND		ug/kg	0.32	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.64	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.32	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.32	--	1
1,1-Dichloropropene	ND		ug/kg	0.32	--	1
Bromoform	ND		ug/kg	2.6	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.32	--	1
Benzene	ND		ug/kg	0.32	--	1
Toluene	1.0		ug/kg	0.64	--	1
Ethylbenzene	ND		ug/kg	0.64	--	1
Chloromethane	ND		ug/kg	2.6	--	1
Bromomethane	ND		ug/kg	1.3	--	1
Vinyl chloride	ND		ug/kg	0.64	--	1
Chloroethane	ND		ug/kg	1.3	--	1
1,1-Dichloroethene	ND		ug/kg	0.64	--	1
trans-1,2-Dichloroethene	ND		ug/kg	0.97	--	1



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-13  
 Client ID: TP-16, S-2  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/20/20  
 Field Prep: Not Specified

Sample Depth: 12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.32	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.3	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.3	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.3	--	1
Methyl tert butyl ether	ND		ug/kg	1.3	--	1
p/m-Xylene	ND		ug/kg	1.3	--	1
o-Xylene	ND		ug/kg	0.64	--	1
Xylenes, Total	ND		ug/kg	0.64	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.64	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.64	--	1
Dibromomethane	ND		ug/kg	1.3	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.3	--	1
Styrene	ND		ug/kg	0.64	--	1
Dichlorodifluoromethane	ND		ug/kg	6.4	--	1
Acetone	ND		ug/kg	600	--	1
Carbon disulfide	ND		ug/kg	6.4	--	1
Methyl ethyl ketone	ND		ug/kg	6.4	--	1
Methyl isobutyl ketone	ND		ug/kg	6.4	--	1
2-Hexanone	ND		ug/kg	6.4	--	1
Bromochloromethane	ND		ug/kg	1.3	--	1
Tetrahydrofuran	ND		ug/kg	2.6	--	1
2,2-Dichloropropane	ND		ug/kg	1.3	--	1
1,2-Dibromoethane	ND		ug/kg	0.64	--	1
1,3-Dichloropropane	ND		ug/kg	1.3	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.32	--	1
Bromobenzene	ND		ug/kg	1.3	--	1
n-Butylbenzene	ND		ug/kg	0.64	--	1
sec-Butylbenzene	ND		ug/kg	0.64	--	1
tert-Butylbenzene	ND		ug/kg	1.3	--	1
o-Chlorotoluene	ND		ug/kg	1.3	--	1
p-Chlorotoluene	ND		ug/kg	1.3	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	1.9	--	1
Hexachlorobutadiene	ND		ug/kg	2.6	--	1
Isopropylbenzene	ND		ug/kg	0.64	--	1
p-Isopropyltoluene	ND		ug/kg	0.64	--	1
Naphthalene	ND		ug/kg	2.6	--	1
n-Propylbenzene	ND		ug/kg	0.64	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-13**Date Collected:** 02/18/20 14:00**Client ID:** TP-16, S-2**Date Received:** 02/20/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	1.3	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.3	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.3	--	1
Diethyl ether	ND		ug/kg	1.3	--	1
Diisopropyl Ether	ND		ug/kg	1.3	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	1.3	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	1.3	--	1
1,4-Dioxane	ND		ug/kg	52	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	100		70-130

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 08:41  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02,07 Batch: WG1342775-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	0.50	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 08:41  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02,07 Batch: WG1342775-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	600	--
Carbon disulfide	ND		ug/kg	10	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8260C  
**Analytical Date:** 02/20/20 08:41  
**Analyst:** MV

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02,07 Batch: WG1342775-5					
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
Diethyl ether	ND		ug/kg	2.0	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 19:38  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 09,11,13 Batch: WG1343024-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	0.50	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
 Analytical Date: 02/20/20 19:38  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 09,11,13 Batch: WG1343024-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	600	--
Carbon disulfide	ND		ug/kg	10	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8260C  
**Analytical Date:** 02/20/20 19:38  
**Analyst:** AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 09,11,13 Batch: WG1343024-5					
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
Diethyl ether	ND		ug/kg	2.0	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	97		70-130





## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02,07 Batch: WG1342775-3 WG1342775-4								
Methylene chloride	96		99		70-130	3		20
1,1-Dichloroethane	101		102		70-130	1		20
Chloroform	99		99		70-130	0		20
Carbon tetrachloride	106		108		70-130	2		20
1,2-Dichloropropane	100		102		70-130	2		20
Dibromochloromethane	81		83		70-130	2		20
1,1,2-Trichloroethane	84		87		70-130	4		20
Tetrachloroethene	87		88		70-130	1		20
Chlorobenzene	84		85		70-130	1		20
Trichlorofluoromethane	106		107		70-130	1		20
1,2-Dichloroethane	95		98		70-130	3		20
1,1,1-Trichloroethane	96		97		70-130	1		20
Bromodichloromethane	95		97		70-130	2		20
trans-1,3-Dichloropropene	88		90		70-130	2		20
cis-1,3-Dichloropropene	98		100		70-130	2		20
1,1-Dichloropropene	100		101		70-130	1		20
Bromoform	81		83		70-130	2		20
1,1,2,2-Tetrachloroethane	77		79		70-130	3		20
Benzene	96		97		70-130	1		20
Toluene	87		88		70-130	1		20
Ethylbenzene	88		89		70-130	1		20
Chloromethane	103		105		70-130	2		20
Bromomethane	111		111		70-130	0		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02,07 Batch: WG1342775-3 WG1342775-4								
Vinyl chloride	103		105		70-130	2		20
Chloroethane	100		101		70-130	1		20
1,1-Dichloroethene	104		106		70-130	2		20
trans-1,2-Dichloroethene	103		104		70-130	1		20
Trichloroethene	97		98		70-130	1		20
1,2-Dichlorobenzene	84		86		70-130	2		20
1,3-Dichlorobenzene	86		88		70-130	2		20
1,4-Dichlorobenzene	85		85		70-130	0		20
Methyl tert butyl ether	96		99		70-130	3		20
p/m-Xylene	85		86		70-130	1		20
o-Xylene	84		85		70-130	1		20
cis-1,2-Dichloroethene	101		103		70-130	2		20
Dibromomethane	98		100		70-130	2		20
1,2,3-Trichloropropane	80		81		70-130	1		20
Styrene	85		86		70-130	1		20
Dichlorodifluoromethane	100		101		70-130	1		20
Acetone	101		96		70-130	5		20
Carbon disulfide	97		98		70-130	1		20
Methyl ethyl ketone	94		94		70-130	0		20
Methyl isobutyl ketone	87		90		70-130	3		20
2-Hexanone	75		78		70-130	4		20
Bromochloromethane	100		102		70-130	2		20
Tetrahydrofuran	95		98		70-130	3		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02,07 Batch: WG1342775-3 WG1342775-4								
2,2-Dichloropropane	99		100		70-130	1		20
1,2-Dibromoethane	87		90		70-130	3		20
1,3-Dichloropropane	85		88		70-130	3		20
1,1,1,2-Tetrachloroethane	83		83		70-130	0		20
Bromobenzene	84		85		70-130	1		20
n-Butylbenzene	87		87		70-130	0		20
sec-Butylbenzene	85		85		70-130	0		20
tert-Butylbenzene	84		85		70-130	1		20
o-Chlorotoluene	83		84		70-130	1		20
p-Chlorotoluene	84		85		70-130	1		20
1,2-Dibromo-3-chloropropane	80		83		70-130	4		20
Hexachlorobutadiene	85		87		70-130	2		20
Isopropylbenzene	85		86		70-130	1		20
p-Isopropyltoluene	87		87		70-130	0		20
Naphthalene	82		85		70-130	4		20
n-Propylbenzene	86		87		70-130	1		20
1,2,3-Trichlorobenzene	87		89		70-130	2		20
1,2,4-Trichlorobenzene	92		92		70-130	0		20
1,3,5-Trimethylbenzene	85		85		70-130	0		20
1,2,4-Trimethylbenzene	86		86		70-130	0		20
Diethyl ether	102		103		70-130	1		20
Diisopropyl Ether	99		101		70-130	2		20
Ethyl-Tert-Butyl-Ether	98		100		70-130	2		20

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02,07 Batch: WG1342775-3 WG1342775-4								
Tertiary-Amyl Methyl Ether	96		98		70-130	2		20
1,4-Dioxane	119		116		70-130	3		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	94		95		70-130
Toluene-d8	92		92		70-130
4-Bromofluorobenzene	98		99		70-130
Dibromofluoromethane	101		101		70-130

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 09,11,13 Batch: WG1343024-3 WG1343024-4								
Methylene chloride	102		105		70-130	3		20
1,1-Dichloroethane	106		106		70-130	0		20
Chloroform	102		103		70-130	1		20
Carbon tetrachloride	106		106		70-130	0		20
1,2-Dichloropropane	105		105		70-130	0		20
Dibromochloromethane	85		86		70-130	1		20
1,1,2-Trichloroethane	89		89		70-130	0		20
Tetrachloroethene	88		88		70-130	0		20
Chlorobenzene	87		88		70-130	1		20
Trichlorofluoromethane	103		103		70-130	0		20
1,2-Dichloroethane	100		101		70-130	1		20
1,1,1-Trichloroethane	98		98		70-130	0		20
Bromodichloromethane	99		102		70-130	3		20
trans-1,3-Dichloropropene	90		91		70-130	1		20
cis-1,3-Dichloropropene	102		104		70-130	2		20
1,1-Dichloropropene	102		100		70-130	2		20
Bromoform	82		84		70-130	2		20
1,1,2,2-Tetrachloroethane	79		80		70-130	1		20
Benzene	100		101		70-130	1		20
Toluene	90		90		70-130	0		20
Ethylbenzene	91		91		70-130	0		20
Chloromethane	106		108		70-130	2		20
Bromomethane	135	Q	126		70-130	7		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007474

**Report Date:** 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 09,11,13 Batch: WG1343024-3 WG1343024-4								
Vinyl chloride	106		105		70-130	1		20
Chloroethane	105		104		70-130	1		20
1,1-Dichloroethene	106		105		70-130	1		20
trans-1,2-Dichloroethene	107		108		70-130	1		20
Trichloroethene	101		100		70-130	1		20
1,2-Dichlorobenzene	85		87		70-130	2		20
1,3-Dichlorobenzene	87		88		70-130	1		20
1,4-Dichlorobenzene	86		87		70-130	1		20
Methyl tert butyl ether	104		104		70-130	0		20
p/m-Xylene	88		88		70-130	0		20
o-Xylene	87		87		70-130	0		20
cis-1,2-Dichloroethene	106		106		70-130	0		20
Dibromomethane	104		105		70-130	1		20
1,2,3-Trichloropropane	81		81		70-130	0		20
Styrene	88		89		70-130	1		20
Dichlorodifluoromethane	97		95		70-130	2		20
Acetone	103		99		70-130	4		20
Carbon disulfide	99		97		70-130	2		20
Methyl ethyl ketone	102		96		70-130	6		20
Methyl isobutyl ketone	92		94		70-130	2		20
2-Hexanone	78		78		70-130	0		20
Bromochloromethane	106		106		70-130	0		20
Tetrahydrofuran	101		103		70-130	2		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 09,11,13 Batch: WG1343024-3 WG1343024-4								
2,2-Dichloropropane	100		100		70-130	0		20
1,2-Dibromoethane	90		92		70-130	2		20
1,3-Dichloropropane	89		90		70-130	1		20
1,1,1,2-Tetrachloroethane	85		86		70-130	1		20
Bromobenzene	86		87		70-130	1		20
n-Butylbenzene	87		86		70-130	1		20
sec-Butylbenzene	84		84		70-130	0		20
tert-Butylbenzene	85		85		70-130	0		20
o-Chlorotoluene	84		85		70-130	1		20
p-Chlorotoluene	86		86		70-130	0		20
1,2-Dibromo-3-chloropropane	81		83		70-130	2		20
Hexachlorobutadiene	85		85		70-130	0		20
Isopropylbenzene	86		86		70-130	0		20
p-Isopropyltoluene	86		87		70-130	1		20
Naphthalene	84		86		70-130	2		20
n-Propylbenzene	86		86		70-130	0		20
1,2,3-Trichlorobenzene	88		89		70-130	1		20
1,2,4-Trichlorobenzene	92		92		70-130	0		20
1,3,5-Trimethylbenzene	85		86		70-130	1		20
1,2,4-Trimethylbenzene	86		87		70-130	1		20
Diethyl ether	107		110		70-130	3		20
Diisopropyl Ether	105		106		70-130	1		20
Ethyl-Tert-Butyl-Ether	104		105		70-130	1		20

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Lab Number:** L2007474

**Project Number:** 6735

**Report Date:** 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 09,11,13 Batch: WG1343024-3 WG1343024-4								
Tertiary-Amyl Methyl Ether	102		103		70-130	1		20
1,4-Dioxane	110		111		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		94		70-130
Toluene-d8	91		91		70-130
4-Bromofluorobenzene	97		97		70-130
Dibromofluoromethane	101		102		70-130



# SEMIVOLATILES

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-01 D  
 Client ID: TP-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 10:26  
 Analyst: JG  
 Percent Solids: 85%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	1500	--	10
1,2,4-Trichlorobenzene	ND		ug/kg	1900	--	10
Hexachlorobenzene	ND		ug/kg	800	--	10
Bis(2-chloroethyl)ether	ND		ug/kg	800	--	10
2-Chloronaphthalene	ND		ug/kg	1900	--	10
1,2-Dichlorobenzene	ND		ug/kg	1900	--	10
1,3-Dichlorobenzene	ND		ug/kg	1900	--	10
1,4-Dichlorobenzene	ND		ug/kg	800	--	10
3,3'-Dichlorobenzidine	ND		ug/kg	1900	--	10
2,4-Dinitrotoluene	ND		ug/kg	800	--	10
2,6-Dinitrotoluene	ND		ug/kg	1900	--	10
Azobenzene	ND		ug/kg	1900	--	10
Fluoranthene	29000		ug/kg	1100	--	10
4-Bromophenyl phenyl ether	ND		ug/kg	1900	--	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	800	--	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	--	10
Hexachlorobutadiene	ND		ug/kg	1900	--	10
Hexachloroethane	ND		ug/kg	800	--	10
Isophorone	ND		ug/kg	1700	--	10
Naphthalene	ND		ug/kg	1900	--	10
Nitrobenzene	ND		ug/kg	1700	--	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	1900	--	10
Butyl benzyl phthalate	ND		ug/kg	1900	--	10
Di-n-butylphthalate	ND		ug/kg	1900	--	10
Di-n-octylphthalate	ND		ug/kg	1900	--	10
Diethyl phthalate	ND		ug/kg	1900	--	10
Dimethyl phthalate	ND		ug/kg	800	--	10
Benzo(a)anthracene	15000		ug/kg	1100	--	10

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-01 D  
 Client ID: TP-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	16000		ug/kg	1500	--	10
Benzo(b)fluoranthene	20000		ug/kg	1100	--	10
Benzo(k)fluoranthene	5400		ug/kg	1100	--	10
Chrysene	14000		ug/kg	1100	--	10
Acenaphthylene	ND		ug/kg	1500	--	10
Anthracene	3300		ug/kg	1100	--	10
Benzo(ghi)perylene	9600		ug/kg	1500	--	10
Fluorene	ND		ug/kg	1900	--	10
Phenanthrene	13000		ug/kg	1100	--	10
Dibenzo(a,h)anthracene	2100		ug/kg	800	--	10
Indeno(1,2,3-cd)pyrene	9600		ug/kg	1500	--	10
Pyrene	25000		ug/kg	1100	--	10
Aniline	ND		ug/kg	2300	--	10
4-Chloroaniline	ND		ug/kg	1900	--	10
Dibenzofuran	ND		ug/kg	1900	--	10
2-Methylnaphthalene	ND		ug/kg	800	--	10
Acetophenone	ND		ug/kg	1900	--	10
2,4,6-Trichlorophenol	ND		ug/kg	800	--	10
2-Chlorophenol	ND		ug/kg	800	--	10
2,4-Dichlorophenol	ND		ug/kg	800	--	10
2,4-Dimethylphenol	ND		ug/kg	800	--	10
2-Nitrophenol	ND		ug/kg	4100	--	10
4-Nitrophenol	ND		ug/kg	2700	--	10
2,4-Dinitrophenol	ND		ug/kg	9200	--	10
Pentachlorophenol	ND		ug/kg	3800	--	10
Phenol	ND		ug/kg	1900	--	10
2-Methylphenol	ND		ug/kg	1900	--	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	--	10
2,4,5-Trichlorophenol	ND		ug/kg	1900	--	10
Pyridine	ND		ug/kg	2100	--	10

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-01 D

Date Collected: 02/18/20 14:00

Client ID: TP-6

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	68		30-130
Phenol-d6	76		30-130
Nitrobenzene-d5	78		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	89		30-130
4-Terphenyl-d14	82		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-03 D  
 Client ID: TP-9  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-3  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 10:10  
 Analyst: WR  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 00:04

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs - Westborough Lab						
Acenaphthene	540		ug/kg	300	--	2
Fluoranthene	7800		ug/kg	220	--	2
Naphthalene	ND		ug/kg	370	--	2
Benzo(a)anthracene	3600		ug/kg	220	--	2
Benzo(a)pyrene	3600		ug/kg	300	--	2
Benzo(b)fluoranthene	4300		ug/kg	220	--	2
Benzo(k)fluoranthene	1400		ug/kg	220	--	2
Chrysene	3300		ug/kg	220	--	2
Acenaphthylene	ND		ug/kg	300	--	2
Anthracene	1400		ug/kg	220	--	2
Benzo(ghi)perylene	1900		ug/kg	300	--	2
Fluorene	420		ug/kg	370	--	2
Phenanthrene	6100		ug/kg	220	--	2
Dibenzo(a,h)anthracene	480		ug/kg	160	--	2
Indeno(1,2,3-cd)pyrene	2200		ug/kg	300	--	2
Pyrene	6600		ug/kg	220	--	2
2-Methylnaphthalene	ND		ug/kg	160	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	108		30-130
2-Fluorobiphenyl	93		30-130
4-Terphenyl-d14	91		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-06  
 Client ID: TP-11  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/20/20 22:27  
 Analyst: SZ  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	77	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	77	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	77	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	77	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	460		ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	77	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	77	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	ND		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	77	--	1
Benzo(a)anthracene	210		ug/kg	110	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-06**Date Collected:** 02/19/20 14:00**Client ID:** TP-11**Date Received:** 02/19/20**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Field Prep:** Not Specified**Sample Depth:** 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	200		ug/kg	150	--	1
Benzo(b)fluoranthene	250		ug/kg	110	--	1
Benzo(k)fluoranthene	ND		ug/kg	110	--	1
Chrysene	230		ug/kg	110	--	1
Acenaphthylene	ND		ug/kg	150	--	1
Anthracene	ND		ug/kg	110	--	1
Benzo(ghi)perylene	ND		ug/kg	150	--	1
Fluorene	ND		ug/kg	180	--	1
Phenanthrene	350		ug/kg	110	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	77	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	--	1
Pyrene	390		ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	ND		ug/kg	180	--	1
2-Methylnaphthalene	ND		ug/kg	77	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	77	--	1
2-Chlorophenol	ND		ug/kg	77	--	1
2,4-Dichlorophenol	ND		ug/kg	77	--	1
2,4-Dimethylphenol	ND		ug/kg	77	--	1
2-Nitrophenol	ND		ug/kg	400	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	880	--	1
Pentachlorophenol	ND		ug/kg	370	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1
Pyridine	ND		ug/kg	200	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-06

Date Collected: 02/19/20 14:00

Client ID: TP-11

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		30-130
Phenol-d6	86		30-130
Nitrobenzene-d5	85		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	108		30-130
4-Terphenyl-d14	104		30-130



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-08  
 Client ID: TP-14 0-6'  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/20/20 22:50  
 Analyst: SZ  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	1200		ug/kg	150	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	--	1
Hexachlorobenzene	ND		ug/kg	78	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	78	--	1
2-Chloronaphthalene	ND		ug/kg	180	--	1
1,2-Dichlorobenzene	ND		ug/kg	180	--	1
1,3-Dichlorobenzene	ND		ug/kg	180	--	1
1,4-Dichlorobenzene	ND		ug/kg	78	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	--	1
2,4-Dinitrotoluene	ND		ug/kg	78	--	1
2,6-Dinitrotoluene	ND		ug/kg	180	--	1
Azobenzene	ND		ug/kg	180	--	1
Fluoranthene	11000	E	ug/kg	110	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	78	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	--	1
Hexachlorobutadiene	ND		ug/kg	180	--	1
Hexachloroethane	ND		ug/kg	78	--	1
Isophorone	ND		ug/kg	170	--	1
Naphthalene	570		ug/kg	180	--	1
Nitrobenzene	ND		ug/kg	170	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	--	1
Butyl benzyl phthalate	ND		ug/kg	180	--	1
Di-n-butylphthalate	ND		ug/kg	180	--	1
Di-n-octylphthalate	ND		ug/kg	180	--	1
Diethyl phthalate	ND		ug/kg	180	--	1
Dimethyl phthalate	ND		ug/kg	78	--	1
Benzo(a)anthracene	5300		ug/kg	110	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-08

Date Collected: 02/18/20 14:00

Client ID: TP-14 0-6'

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	5100		ug/kg	150	--	1
Benzo(b)fluoranthene	6100		ug/kg	110	--	1
Benzo(k)fluoranthene	1600		ug/kg	110	--	1
Chrysene	4800		ug/kg	110	--	1
Acenaphthylene	430		ug/kg	150	--	1
Anthracene	2700		ug/kg	110	--	1
Benzo(ghi)perylene	2500		ug/kg	150	--	1
Fluorene	1100		ug/kg	180	--	1
Phenanthrene	9600	E	ug/kg	110	--	1
Dibenzo(a,h)anthracene	660		ug/kg	78	--	1
Indeno(1,2,3-cd)pyrene	2700		ug/kg	150	--	1
Pyrene	9400	E	ug/kg	110	--	1
Aniline	ND		ug/kg	220	--	1
4-Chloroaniline	ND		ug/kg	180	--	1
Dibenzofuran	720		ug/kg	180	--	1
2-Methylnaphthalene	310		ug/kg	78	--	1
Acetophenone	ND		ug/kg	180	--	1
2,4,6-Trichlorophenol	ND		ug/kg	78	--	1
2-Chlorophenol	ND		ug/kg	78	--	1
2,4-Dichlorophenol	ND		ug/kg	78	--	1
2,4-Dimethylphenol	ND		ug/kg	78	--	1
2-Nitrophenol	ND		ug/kg	400	--	1
4-Nitrophenol	ND		ug/kg	260	--	1
2,4-Dinitrophenol	ND		ug/kg	890	--	1
Pentachlorophenol	ND		ug/kg	370	--	1
Phenol	ND		ug/kg	180	--	1
2-Methylphenol	ND		ug/kg	180	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	--	1
2,4,5-Trichlorophenol	ND		ug/kg	180	--	1
Pyridine	ND		ug/kg	200	--	1

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-08

Date Collected: 02/18/20 14:00

Client ID: TP-14 0-6'

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		30-130
Phenol-d6	84		30-130
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	100		30-130
4-Terphenyl-d14	82		30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-08 D  
 Client ID: TP-14 0-6'  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 10:49  
 Analyst: JG  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## MCP Semivolatile Organics - Westborough Lab

Fluoranthene	11000		ug/kg	560	--	5
Phenanthrene	9100		ug/kg	560	--	5
Pyrene	9100		ug/kg	560	--	5

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-10 D  
 Client ID: TP-15  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 11:11  
 Analyst: JG  
 Percent Solids: 85%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	11000		ug/kg	3000	--	20
1,2,4-Trichlorobenzene	ND		ug/kg	3800	--	20
Hexachlorobenzene	ND		ug/kg	1600	--	20
Bis(2-chloroethyl)ether	ND		ug/kg	1600	--	20
2-Chloronaphthalene	ND		ug/kg	3800	--	20
1,2-Dichlorobenzene	ND		ug/kg	3800	--	20
1,3-Dichlorobenzene	ND		ug/kg	3800	--	20
1,4-Dichlorobenzene	ND		ug/kg	1600	--	20
3,3'-Dichlorobenzidine	ND		ug/kg	3800	--	20
2,4-Dinitrotoluene	ND		ug/kg	1600	--	20
2,6-Dinitrotoluene	ND		ug/kg	3800	--	20
Azobenzene	ND		ug/kg	3800	--	20
Fluoranthene	83000		ug/kg	2300	--	20
4-Bromophenyl phenyl ether	ND		ug/kg	3800	--	20
Bis(2-chloroisopropyl)ether	ND		ug/kg	1600	--	20
Bis(2-chloroethoxy)methane	ND		ug/kg	4100	--	20
Hexachlorobutadiene	ND		ug/kg	3800	--	20
Hexachloroethane	ND		ug/kg	1600	--	20
Isophorone	ND		ug/kg	3400	--	20
Naphthalene	ND		ug/kg	3800	--	20
Nitrobenzene	ND		ug/kg	3400	--	20
Bis(2-ethylhexyl)phthalate	ND		ug/kg	3800	--	20
Butyl benzyl phthalate	ND		ug/kg	3800	--	20
Di-n-butylphthalate	ND		ug/kg	3800	--	20
Di-n-octylphthalate	ND		ug/kg	3800	--	20
Diethyl phthalate	ND		ug/kg	3800	--	20
Dimethyl phthalate	ND		ug/kg	1600	--	20
Benzo(a)anthracene	36000		ug/kg	2300	--	20

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-10 D  
 Client ID: TP-15  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	34000		ug/kg	3000	--	20
Benzo(b)fluoranthene	42000		ug/kg	2300	--	20
Benzo(k)fluoranthene	9900		ug/kg	2300	--	20
Chrysene	37000		ug/kg	2300	--	20
Acenaphthylene	ND		ug/kg	3000	--	20
Anthracene	18000		ug/kg	2300	--	20
Benzo(ghi)perylene	17000		ug/kg	3000	--	20
Fluorene	8800		ug/kg	3800	--	20
Phenanthrene	87000		ug/kg	2300	--	20
Dibenzo(a,h)anthracene	4800		ug/kg	1600	--	20
Indeno(1,2,3-cd)pyrene	18000		ug/kg	3000	--	20
Pyrene	78000		ug/kg	2300	--	20
Aniline	ND		ug/kg	4600	--	20
4-Chloroaniline	ND		ug/kg	3800	--	20
Dibenzofuran	4800		ug/kg	3800	--	20
2-Methylnaphthalene	2400		ug/kg	1600	--	20
Acetophenone	ND		ug/kg	3800	--	20
2,4,6-Trichlorophenol	ND		ug/kg	1600	--	20
2-Chlorophenol	ND		ug/kg	1600	--	20
2,4-Dichlorophenol	ND		ug/kg	1600	--	20
2,4-Dimethylphenol	ND		ug/kg	1600	--	20
2-Nitrophenol	ND		ug/kg	8200	--	20
4-Nitrophenol	ND		ug/kg	5300	--	20
2,4-Dinitrophenol	ND		ug/kg	18000	--	20
Pentachlorophenol	ND		ug/kg	7600	--	20
Phenol	ND		ug/kg	3800	--	20
2-Methylphenol	ND		ug/kg	3800	--	20
3-Methylphenol/4-Methylphenol	ND		ug/kg	5500	--	20
2,4,5-Trichlorophenol	ND		ug/kg	3800	--	20
Pyridine	ND		ug/kg	4100	--	20

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-10 D

Date Collected: 02/18/20 14:00

Client ID: TP-15

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	30-130
Phenol-d6	0	Q	30-130
Nitrobenzene-d5	0	Q	30-130
2-Fluorobiphenyl	0	Q	30-130
2,4,6-Tribromophenol	0	Q	30-130
4-Terphenyl-d14	0	Q	30-130

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-12 D  
 Client ID: TP-16  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8270D  
 Analytical Date: 02/21/20 11:35  
 Analyst: JG  
 Percent Solids: 84%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	6300		ug/kg	1600	--	10
1,2,4-Trichlorobenzene	ND		ug/kg	2000	--	10
Hexachlorobenzene	ND		ug/kg	830	--	10
Bis(2-chloroethyl)ether	ND		ug/kg	830	--	10
2-Chloronaphthalene	ND		ug/kg	2000	--	10
1,2-Dichlorobenzene	ND		ug/kg	2000	--	10
1,3-Dichlorobenzene	ND		ug/kg	2000	--	10
1,4-Dichlorobenzene	ND		ug/kg	830	--	10
3,3'-Dichlorobenzidine	ND		ug/kg	2000	--	10
2,4-Dinitrotoluene	ND		ug/kg	830	--	10
2,6-Dinitrotoluene	ND		ug/kg	2000	--	10
Azobenzene	ND		ug/kg	2000	--	10
Fluoranthene	55000		ug/kg	1200	--	10
4-Bromophenyl phenyl ether	ND		ug/kg	2000	--	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	830	--	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2100	--	10
Hexachlorobutadiene	ND		ug/kg	2000	--	10
Hexachloroethane	ND		ug/kg	830	--	10
Isophorone	ND		ug/kg	1800	--	10
Naphthalene	2500		ug/kg	2000	--	10
Nitrobenzene	ND		ug/kg	1800	--	10
Bis(2-ethylhexyl)phthalate	ND		ug/kg	2000	--	10
Butyl benzyl phthalate	ND		ug/kg	2000	--	10
Di-n-butylphthalate	ND		ug/kg	2000	--	10
Di-n-octylphthalate	ND		ug/kg	2000	--	10
Diethyl phthalate	ND		ug/kg	2000	--	10
Dimethyl phthalate	ND		ug/kg	830	--	10
Benzo(a)anthracene	27000		ug/kg	1200	--	10



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-12 D  
 Client ID: TP-16  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	27000		ug/kg	1600	--	10
Benzo(b)fluoranthene	33000		ug/kg	1200	--	10
Benzo(k)fluoranthene	9800		ug/kg	1200	--	10
Chrysene	25000		ug/kg	1200	--	10
Acenaphthylene	ND		ug/kg	1600	--	10
Anthracene	11000		ug/kg	1200	--	10
Benzo(ghi)perylene	14000		ug/kg	1600	--	10
Fluorene	5600		ug/kg	2000	--	10
Phenanthrene	44000		ug/kg	1200	--	10
Dibenzo(a,h)anthracene	3900		ug/kg	830	--	10
Indeno(1,2,3-cd)pyrene	15000		ug/kg	1600	--	10
Pyrene	46000		ug/kg	1200	--	10
Aniline	ND		ug/kg	2400	--	10
4-Chloroaniline	ND		ug/kg	2000	--	10
Dibenzofuran	2900		ug/kg	2000	--	10
2-Methylnaphthalene	1200		ug/kg	830	--	10
Acetophenone	ND		ug/kg	2000	--	10
2,4,6-Trichlorophenol	ND		ug/kg	830	--	10
2-Chlorophenol	ND		ug/kg	830	--	10
2,4-Dichlorophenol	ND		ug/kg	830	--	10
2,4-Dimethylphenol	ND		ug/kg	830	--	10
2-Nitrophenol	ND		ug/kg	4200	--	10
4-Nitrophenol	ND		ug/kg	2800	--	10
2,4-Dinitrophenol	ND		ug/kg	9400	--	10
Pentachlorophenol	ND		ug/kg	3900	--	10
Phenol	ND		ug/kg	2000	--	10
2-Methylphenol	ND		ug/kg	2000	--	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2800	--	10
2,4,5-Trichlorophenol	ND		ug/kg	2000	--	10
Pyridine	ND		ug/kg	2100	--	10

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-12 D

Date Collected: 02/18/20 14:00

Client ID: TP-16

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP Semivolatile Organics - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		30-130
Phenol-d6	66		30-130
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	68		30-130
2,4,6-Tribromophenol	76		30-130
4-Terphenyl-d14	69		30-130

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8270D  
**Analytical Date:** 02/20/20 08:18  
**Analyst:** WR

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/20/20 00:04

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 03 Batch: WG1342466-1					
Acenaphthene	ND		ug/kg	130	--
Fluoranthene	ND		ug/kg	97	--
Naphthalene	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	97	--
Benzo(a)pyrene	ND		ug/kg	130	--
Benzo(b)fluoranthene	ND		ug/kg	97	--
Benzo(k)fluoranthene	ND		ug/kg	97	--
Chrysene	ND		ug/kg	97	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	97	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	97	--
Dibenzo(a,h)anthracene	ND		ug/kg	68	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	97	--
2-Methylnaphthalene	ND		ug/kg	68	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	92		30-130
2-Fluorobiphenyl	98		30-130
4-Terphenyl-d14	104		30-130



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8270D  
**Analytical Date:** 02/20/20 20:56  
**Analyst:** IM

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01,06,08,10,12 Batch: WG1342499-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	68	--
Bis(2-chloroethyl)ether	ND		ug/kg	68	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	68	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	68	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	98	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	68	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	68	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	68	--
Benzo(a)anthracene	ND		ug/kg	98	--
Benzo(a)pyrene	ND		ug/kg	130	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8270D  
**Analytical Date:** 02/20/20 20:56  
**Analyst:** IM

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01,06,08,10,12 Batch: WG1342499-1					
Benzo(b)fluoranthene	ND		ug/kg	98	--
Benzo(k)fluoranthene	ND		ug/kg	98	--
Chrysene	ND		ug/kg	98	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	98	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	98	--
Dibenzo(a,h)anthracene	ND		ug/kg	68	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	98	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	68	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	68	--
2-Chlorophenol	ND		ug/kg	68	--
2,4-Dichlorophenol	ND		ug/kg	68	--
2,4-Dimethylphenol	ND		ug/kg	68	--
2-Nitrophenol	ND		ug/kg	350	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	780	--
Pentachlorophenol	ND		ug/kg	320	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--
Pyridine	ND		ug/kg	180	--

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8270D  
 Analytical Date: 02/20/20 20:56  
 Analyst: IM

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:07

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01,06,08,10,12 Batch: WG1342499-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		30-130
Phenol-d6	62		30-130
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	59		30-130
2,4,6-Tribromophenol	67		30-130
4-Terphenyl-d14	74		30-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1342466-2 WG1342466-3								
Acenaphthene	79		90		40-140	13		30
Fluoranthene	80		93		40-140	15		30
Naphthalene	77		90		40-140	16		30
Benzo(a)anthracene	78		92		40-140	16		30
Benzo(a)pyrene	77		92		40-140	18		30
Benzo(b)fluoranthene	83		98		40-140	17		30
Benzo(k)fluoranthene	80		95		40-140	17		30
Chrysene	77		92		40-140	18		30
Acenaphthylene	77		90		40-140	16		30
Anthracene	80		94		40-140	16		30
Benzo(ghi)perylene	79		93		40-140	16		30
Fluorene	81		93		40-140	14		30
Phenanthrene	80		92		40-140	14		30
Dibenzo(a,h)anthracene	82		97		40-140	17		30
Indeno(1,2,3-cd)pyrene	78		92		40-140	16		30
Pyrene	79		92		40-140	15		30
2-Methylnaphthalene	79		93		40-140	16		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007474

**Report Date:** 02/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG1342466-2 WG1342466-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Nitrobenzene-d5	75		88		30-130
2-Fluorobiphenyl	81		96		30-130
4-Terphenyl-d14	82		97		30-130



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007474

**Report Date:** 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342499-2 WG1342499-3								
Acenaphthene	98		100		40-140	2		30
1,2,4-Trichlorobenzene	97		96		40-140	1		30
Hexachlorobenzene	106		107		40-140	1		30
Bis(2-chloroethyl)ether	93		90		40-140	3		30
2-Chloronaphthalene	101		100		40-140	1		30
1,2-Dichlorobenzene	92		90		40-140	2		30
1,3-Dichlorobenzene	88		87		40-140	1		30
1,4-Dichlorobenzene	89		89		40-140	0		30
3,3'-Dichlorobenzidine	80		81		40-140	1		30
2,4-Dinitrotoluene	105		105		40-140	0		30
2,6-Dinitrotoluene	107		103		40-140	4		30
Azobenzene	102		103		40-140	1		30
Fluoranthene	106		104		40-140	2		30
4-Bromophenyl phenyl ether	106		105		40-140	1		30
Bis(2-chloroisopropyl)ether	92		90		40-140	2		30
Bis(2-chloroethoxy)methane	96		95		40-140	1		30
Hexachlorobutadiene	100		100		40-140	0		30
Hexachloroethane	87		87		40-140	0		30
Isophorone	99		96		40-140	3		30
Naphthalene	95		94		40-140	1		30
Nitrobenzene	96		96		40-140	0		30
Bis(2-ethylhexyl)phthalate	102		102		40-140	0		30
Butyl benzyl phthalate	108		109		40-140	1		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007474

**Report Date:** 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342499-2 WG1342499-3								
Di-n-butylphthalate	110		108		40-140	2		30
Di-n-octylphthalate	110		109		40-140	1		30
Diethyl phthalate	103		102		40-140	1		30
Dimethyl phthalate	101		98		40-140	3		30
Benzo(a)anthracene	102		102		40-140	0		30
Benzo(a)pyrene	108		108		40-140	0		30
Benzo(b)fluoranthene	110		112		40-140	2		30
Benzo(k)fluoranthene	107		101		40-140	6		30
Chrysene	102		103		40-140	1		30
Acenaphthylene	100		98		40-140	2		30
Anthracene	105		103		40-140	2		30
Benzo(ghi)perylene	106		106		40-140	0		30
Fluorene	103		104		40-140	1		30
Phenanthrene	102		100		40-140	2		30
Dibenzo(a,h)anthracene	106		105		40-140	1		30
Indeno(1,2,3-cd)pyrene	107		104		40-140	3		30
Pyrene	103		102		40-140	1		30
Aniline	52		41		40-140	24		30
4-Chloroaniline	102		100		40-140	2		30
Dibenzofuran	98		99		40-140	1		30
2-Methylnaphthalene	98		96		40-140	2		30
Acetophenone	98		97		40-140	1		30
2,4,6-Trichlorophenol	108		103		30-130	5		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342499-2 WG1342499-3								
2-Chlorophenol	101		99		30-130	2		30
2,4-Dichlorophenol	109		105		30-130	4		30
2,4-Dimethylphenol	102		97		30-130	5		30
2-Nitrophenol	107		105		30-130	2		30
4-Nitrophenol	92		93		30-130	1		30
2,4-Dinitrophenol	41		23	Q	30-130	56	Q	30
Pentachlorophenol	80		78		30-130	3		30
Phenol	93		91		30-130	2		30
2-Methylphenol	100		98		30-130	2		30
3-Methylphenol/4-Methylphenol	108		103		30-130	5		30
2,4,5-Trichlorophenol	110		107		30-130	3		30
Pyridine	74		53		30-130	33	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	96		93		30-130
Phenol-d6	98		96		30-130
Nitrobenzene-d5	97		94		30-130
2-Fluorobiphenyl	95		91		30-130
2,4,6-Tribromophenol	111		108		30-130
4-Terphenyl-d14	110		107		30-130

# **PETROLEUM HYDROCARBONS**

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-01 D  
 Client ID: TP-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/20/20 11:55  
 Analyst: LL  
 Percent Solids: 85%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	518000		ug/kg	75500	--	2
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	73			40-140		

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-06  
 Client ID: TP-11  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/20/20 09:15  
 Analyst: LL  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	ND		ug/kg	36800	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	79			40-140		

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**SAMPLE RESULTS**

**Lab ID:** L2007474-08  
**Client ID:** TP-14 0-6'  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 0-6  
**Matrix:** Fill  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 02/20/20 08:43  
**Analyst:** LL  
**Percent Solids:** 88%

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/20/20 03:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	186000		ug/kg	37400	--	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	82			40-140		

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-10 D  
 Client ID: TP-15  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/20/20 11:55  
 Analyst: LL  
 Percent Solids: 85%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	1020000		ug/kg	77200	--	2
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	86			40-140		



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-12 D  
 Client ID: TP-16  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 02/20/20 12:27  
 Analyst: LL  
 Percent Solids: 84%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 03:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	1260000		ug/kg	189000	--	5
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
o-Terphenyl	88			40-140		

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 02/20/20 08:17  
**Analyst:** AN

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/19/20 17:33

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01,06,08,10,12 Batch: WG1342402-1					
TPH (C10-C36)	ND		ug/kg	32600	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	73		40-140

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007474**Report Date:** 02/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342402-2								
TPH (C10-C36)	53		-		40-140	-		40

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
o-Terphenyl	86				40-140

# PCBS

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-01  
 Client ID: TP-6  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 11:11  
 Analyst: AWS  
 Percent Solids: 85%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.8	--	1	A
Aroclor 1221	ND		ug/kg	37.8	--	1	A
Aroclor 1232	ND		ug/kg	37.8	--	1	A
Aroclor 1242	ND		ug/kg	37.8	--	1	A
Aroclor 1248	195		ug/kg	37.8	--	1	B
Aroclor 1254	183		ug/kg	37.8	--	1	B
Aroclor 1260	65.0		ug/kg	37.8	--	1	B
Aroclor 1262	ND		ug/kg	37.8	--	1	A
Aroclor 1268	ND		ug/kg	37.8	--	1	A
PCBs, Total	443		ug/kg	37.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	92		30-150	B
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	64		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-03  
 Client ID: TP-9  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-3  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 11:23  
 Analyst: AWS  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.3	--	1	A
Aroclor 1221	ND		ug/kg	37.3	--	1	A
Aroclor 1232	ND		ug/kg	37.3	--	1	A
Aroclor 1242	ND		ug/kg	37.3	--	1	A
Aroclor 1248	ND		ug/kg	37.3	--	1	A
Aroclor 1254	ND		ug/kg	37.3	--	1	A
Aroclor 1260	ND		ug/kg	37.3	--	1	B
Aroclor 1262	ND		ug/kg	37.3	--	1	A
Aroclor 1268	ND		ug/kg	37.3	--	1	A
PCBs, Total	ND		ug/kg	37.3	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	80		30-150	B
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	77		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-04  
 Client ID: TP-9A  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-3  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 11:35  
 Analyst: AWS  
 Percent Solids: 84%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.7	--	1	A
Aroclor 1221	ND		ug/kg	39.7	--	1	A
Aroclor 1232	ND		ug/kg	39.7	--	1	A
Aroclor 1242	ND		ug/kg	39.7	--	1	A
Aroclor 1248	79.6		ug/kg	39.7	--	1	B
Aroclor 1254	128		ug/kg	39.7	--	1	B
Aroclor 1260	128		ug/kg	39.7	--	1	B
Aroclor 1262	ND		ug/kg	39.7	--	1	A
Aroclor 1268	ND		ug/kg	39.7	--	1	A
PCBs, Total	336		ug/kg	39.7	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	101		30-150	B
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	81		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-06  
 Client ID: TP-11  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 11:47  
 Analyst: AWS  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.0	--	1	A
Aroclor 1221	ND		ug/kg	37.0	--	1	A
Aroclor 1232	ND		ug/kg	37.0	--	1	A
Aroclor 1242	ND		ug/kg	37.0	--	1	A
Aroclor 1248	ND		ug/kg	37.0	--	1	A
Aroclor 1254	ND		ug/kg	37.0	--	1	A
Aroclor 1260	ND		ug/kg	37.0	--	1	A
Aroclor 1262	ND		ug/kg	37.0	--	1	A
Aroclor 1268	ND		ug/kg	37.0	--	1	A
PCBs, Total	ND		ug/kg	37.0	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	76		30-150	B
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	66		30-150	A



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-08  
 Client ID: TP-14 0-6'  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 12:00  
 Analyst: AWS  
 Percent Solids: 88%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.4	--	1	A
Aroclor 1221	ND		ug/kg	36.4	--	1	A
Aroclor 1232	ND		ug/kg	36.4	--	1	A
Aroclor 1242	ND		ug/kg	36.4	--	1	A
Aroclor 1248	ND		ug/kg	36.4	--	1	A
Aroclor 1254	ND		ug/kg	36.4	--	1	A
Aroclor 1260	ND		ug/kg	36.4	--	1	B
Aroclor 1262	ND		ug/kg	36.4	--	1	A
Aroclor 1268	ND		ug/kg	36.4	--	1	A
PCBs, Total	ND		ug/kg	36.4	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	102		30-150	B
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	84		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-10  
 Client ID: TP-15  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 12:12  
 Analyst: AWS  
 Percent Solids: 85%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.6	--	1	A
Aroclor 1221	ND		ug/kg	36.6	--	1	A
Aroclor 1232	ND		ug/kg	36.6	--	1	A
Aroclor 1242	ND		ug/kg	36.6	--	1	A
Aroclor 1248	ND		ug/kg	36.6	--	1	A
Aroclor 1254	ND		ug/kg	36.6	--	1	A
Aroclor 1260	ND		ug/kg	36.6	--	1	A
Aroclor 1262	ND		ug/kg	36.6	--	1	A
Aroclor 1268	ND		ug/kg	36.6	--	1	A
PCBs, Total	ND		ug/kg	36.6	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	89		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	65		30-150	A

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-12  
 Client ID: TP-16  
 Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00  
 Date Received: 02/19/20  
 Field Prep: Not Specified

Sample Depth: 0-6  
 Matrix: Fill  
 Analytical Method: 97,8082A  
 Analytical Date: 02/21/20 12:24  
 Analyst: AWS  
 Percent Solids: 84%

Extraction Method: EPA 3546  
 Extraction Date: 02/20/20 17:20  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 02/21/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.3	--	1	A
Aroclor 1221	ND		ug/kg	38.3	--	1	A
Aroclor 1232	ND		ug/kg	38.3	--	1	A
Aroclor 1242	ND		ug/kg	38.3	--	1	A
Aroclor 1248	ND		ug/kg	38.3	--	1	A
Aroclor 1254	61.0		ug/kg	38.3	--	1	B
Aroclor 1260	ND		ug/kg	38.3	--	1	A
Aroclor 1262	ND		ug/kg	38.3	--	1	A
Aroclor 1268	ND		ug/kg	38.3	--	1	A
PCBs, Total	61.0		ug/kg	38.3	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	71		30-150	B
2,4,5,6-Tetrachloro-m-xylene	54		30-150	A
Decachlorobiphenyl	57		30-150	A

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 97,8082A  
**Analytical Date:** 02/21/20 10:22  
**Analyst:** AWS

**Extraction Method:** EPA 3546  
**Extraction Date:** 02/20/20 17:04  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 02/21/20  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 02/21/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 01,03-04,06,08,10,12 Batch: WG1342872-1						
Aroclor 1016	ND		ug/kg	32.6	--	A
Aroclor 1221	ND		ug/kg	32.6	--	A
Aroclor 1232	ND		ug/kg	32.6	--	A
Aroclor 1242	ND		ug/kg	32.6	--	A
Aroclor 1248	ND		ug/kg	32.6	--	A
Aroclor 1254	ND		ug/kg	32.6	--	A
Aroclor 1260	ND		ug/kg	32.6	--	A
Aroclor 1262	ND		ug/kg	32.6	--	A
Aroclor 1268	ND		ug/kg	32.6	--	A
PCBs, Total	ND		ug/kg	32.6	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	78		30-150	B
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	74		30-150	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 01,03-04,06,08,10,12 Batch: WG1342872-2 WG1342872-3									
Aroclor 1016	79		84		40-140	6		30	A
Aroclor 1260	75		84		40-140	11		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		73		30-150	B
Decachlorobiphenyl	82		81		30-150	B
2,4,5,6-Tetrachloro-m-xylene	75		80		30-150	A
Decachlorobiphenyl	79		84		30-150	A

## METALS

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-01

Date Collected: 02/18/20 14:00

Client ID: TP-6

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	6.18		mg/kg	0.441	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC
Barium, Total	136		mg/kg	0.441	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC
Cadmium, Total	1.37		mg/kg	0.441	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC
Chromium, Total	11.9		mg/kg	0.441	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC
Lead, Total	229		mg/kg	2.20	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC
Mercury, Total	1.81		mg/kg	0.086	--	1	02/20/20 08:00	02/20/20 13:24	EPA 7471B	97,7471B	GD
Selenium, Total	ND		mg/kg	2.20	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.441	--	1	02/20/20 06:20	02/20/20 14:38	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-05

Date Collected: 02/18/20 14:00

Client ID: TP-16

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 3-4

TCLP/SPLP Ext. Date: 02/20/20 05:53

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	16.0		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 10:42	EPA 3015	1,6010D	LC





**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-06

Date Collected: 02/19/20 14:00

Client ID: TP-11

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	6.65		mg/kg	0.446	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC
Barium, Total	16.9		mg/kg	0.446	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.446	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC
Chromium, Total	10.6		mg/kg	0.446	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC
Lead, Total	33.2		mg/kg	2.23	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC
Mercury, Total	ND		mg/kg	0.083	--	1	02/20/20 08:00	02/20/20 13:26	EPA 7471B	97,7471B	GD
Selenium, Total	ND		mg/kg	2.23	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.446	--	1	02/20/20 06:20	02/20/20 14:42	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-08

Date Collected: 02/18/20 14:00

Client ID: TP-14 0-6'

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	5.52		mg/kg	0.437	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC
Barium, Total	43.3		mg/kg	0.437	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.437	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC
Chromium, Total	11.8		mg/kg	0.437	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC
Lead, Total	173		mg/kg	2.18	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC
Mercury, Total	0.512		mg/kg	0.083	--	1	02/20/20 08:00	02/20/20 14:26	EPA 7471B	97,7471B	GD
Selenium, Total	ND		mg/kg	2.18	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.437	--	1	02/20/20 06:20	02/20/20 14:47	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-10

Date Collected: 02/18/20 14:00

Client ID: TP-15

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	6.26		mg/kg	0.454	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC
Barium, Total	219		mg/kg	0.454	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC
Cadmium, Total	0.935		mg/kg	0.454	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC
Chromium, Total	14.5		mg/kg	0.454	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC
Lead, Total	632		mg/kg	2.27	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC
Mercury, Total	0.565		mg/kg	0.088	--	1	02/20/20 08:00	02/20/20 14:28	EPA 7471B	97,7471B	GD
Selenium, Total	ND		mg/kg	2.27	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.454	--	1	02/20/20 06:20	02/20/20 14:51	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-12

Date Collected: 02/18/20 14:00

Client ID: TP-16

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Arsenic, Total	5.30		mg/kg	0.452	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC
Barium, Total	93.8		mg/kg	0.452	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC
Cadmium, Total	0.664		mg/kg	0.452	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC
Chromium, Total	11.5		mg/kg	0.452	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC
Lead, Total	871		mg/kg	2.26	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC
Mercury, Total	0.622		mg/kg	0.088	--	1	02/20/20 08:00	02/20/20 14:29	EPA 7471B	97,7471B	GD
Selenium, Total	ND		mg/kg	2.26	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC
Silver, Total	ND		mg/kg	0.452	--	1	02/20/20 06:20	02/20/20 14:56	EPA 3050B	97,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-14

Date Collected: 02/18/20 14:00

Client ID: TP-14 0-3'

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-3

TCLP/SPLP Ext. Date: 02/20/20 05:53

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 10:46	EPA 3015	1,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-15

Date Collected: 02/18/20 14:00

Client ID: SP-1, S-2

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 02/20/20 05:53

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 10:51	EPA 3015	1,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-16

Date Collected: 02/18/20 14:00

Client ID: SP-1, S-3

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 02/20/20 05:53

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 11:14	EPA 3015	1,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-17

Date Collected: 02/18/20 14:00

Client ID: SP-1, S-4

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 02/20/20 05:53

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 11:19	EPA 3015	1,6010D	LC





**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**SAMPLE RESULTS**

Lab ID: L2007474-18

Date Collected: 02/18/20 14:00

Client ID: SP-1, S-5

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 02/20/20 05:53

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.581		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 11:23	EPA 3015	1,6010D	LC



Project Name: CAMBRIA HOTEL

Lab Number: L2007474

Project Number: 6735

Report Date: 02/21/20

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01,06,08,10,12 Batch: WG1342535-1										
Arsenic, Total	ND		mg/kg	0.400	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC
Barium, Total	ND		mg/kg	0.400	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC
Chromium, Total	ND		mg/kg	0.400	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC
Lead, Total	ND		mg/kg	2.00	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC
Selenium, Total	ND		mg/kg	2.00	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC
Silver, Total	ND		mg/kg	0.400	--	1	02/20/20 06:20	02/20/20 10:50	97,6010D	LC

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01,06,08,10,12 Batch: WG1342553-1										
Mercury, Total	ND		mg/kg	0.083	--	1	02/20/20 08:00	02/20/20 11:54	97,7471B	GD

### Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 05,14-18 Batch: WG1343081-1										
Lead, TCLP	ND		mg/l	0.500	--	1	02/21/20 09:00	02/21/20 10:14	1,6010D	LC

### Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 02/18/20 22:42



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007474

**Report Date:** 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342535-2 WG1342535-3 SRM Lot Number: D105-540								
Arsenic, Total	87		90		70-130	3		30
Barium, Total	81		83		75-125	2		30
Cadmium, Total	83		91		75-125	9		30
Chromium, Total	79		82		70-130	4		30
Lead, Total	79		82		71-128	4		30
Selenium, Total	89		91		63-137	2		30
Silver, Total	83		85		69-131	2		30
MCP Total Metals - Mansfield Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342553-2 WG1342553-3 SRM Lot Number: D105-540								
Mercury, Total	102		80		60-141	24		30
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 05,14-18 Batch: WG1343081-2								
Lead, TCLP	100		-		75-125	-		20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### SAMPLE RESULTS

**Lab ID:** L2007474-01  
**Client ID:** TP-6  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 0-6  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/21/20 05:20	1,1030	MV



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### SAMPLE RESULTS

**Lab ID:** L2007474-06  
**Client ID:** TP-11  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/19/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 0-6  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/21/20 05:20	1,1030	MV



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### SAMPLE RESULTS

**Lab ID:** L2007474-08  
**Client ID:** TP-14 0-6'  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 0-6  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/21/20 05:20	1,1030	MV



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### SAMPLE RESULTS

**Lab ID:** L2007474-10  
**Client ID:** TP-15  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 0-6  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/21/20 05:20	1,1030	MV





**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

### SAMPLE RESULTS

**Lab ID:** L2007474-12  
**Client ID:** TP-16  
**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE

**Date Collected:** 02/18/20 14:00  
**Date Received:** 02/19/20  
**Field Prep:** Not Specified

**Sample Depth:** 0-6  
**Matrix:** Fill

### Test Material Information

**Source of Material:** Unknown  
**Description of Material:** Non-Metallic - Damp Soil  
**Particle Size:** Medium  
**Preliminary Burning Time (sec):** 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/21/20 05:20	1,1030	MV



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-01

Client ID: TP-6

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	210		umhos/cm	10	--	1	-	02/20/20 11:00	1,9050A	MA
Solids, Total	85.1		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA
pH (H)	6.6		SU	-	NA	1	-	02/20/20 09:40	1,9045D	JA
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:22	125,7.3	KF



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-02

Client ID: TP-6, S-1

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-2

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.3		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

**SAMPLE RESULTS**

Lab ID: L2007474-03

Client ID: TP-9

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-3

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.3		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-04

Client ID: TP-9A

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-3

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-06

Client ID: TP-11

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	22		umhos/cm	10	--	1	-	02/20/20 11:00	1,9050A	MA
Solids, Total	87.9		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA
pH (H)	7.8		SU	-	NA	1	-	02/20/20 09:40	1,9045D	JA
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:22	125,7.3	KF



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

**SAMPLE RESULTS**

Lab ID: L2007474-07

Client ID: TP-11, S-2

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/19/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 2-4

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.4		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-08

Client ID: TP-14 0-6'

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	260		umhos/cm	10	--	1	-	02/20/20 11:00	1,9050A	MA
Solids, Total	88.4		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA
pH (H)	7.5		SU	-	NA	1	-	02/20/20 09:40	1,9045D	JA
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:23	125,7.3	KF





**Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007474**Report Date:** 02/21/20**SAMPLE RESULTS****Lab ID:** L2007474-09**Client ID:** TP-14, S-4**Sample Location:** 515 SOMERVILLE AVE., SOMERVILLE**Date Collected:** 02/18/20 14:00**Date Received:** 02/20/20**Field Prep:** Not Specified**Sample Depth:** 5-6**Matrix:** Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.1		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-10

Client ID: TP-15

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	74		umhos/cm	10	--	1	-	02/20/20 11:00	1,9050A	MA
Solids, Total	85.4		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA
pH (H)	8.0		SU	-	NA	1	-	02/20/20 09:40	1,9045D	JA
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:35	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:23	125,7.3	KF



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

**SAMPLE RESULTS**

Lab ID: L2007474-11

Client ID: TP-15, S-4

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/20/20

Field Prep: Not Specified

Sample Depth: 5-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.8		%	0.100	NA	1	-	02/21/20 01:23	121,2540G	YA



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

## SAMPLE RESULTS

Lab ID: L2007474-12

Client ID: TP-16

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/19/20

Field Prep: Not Specified

Sample Depth: 0-6

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	150		umhos/cm	10	--	1	-	02/20/20 11:00	1,9050A	MA
Solids, Total	84.4		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA
pH (H)	8.6		SU	-	NA	1	-	02/20/20 09:40	1,9045D	JA
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 23:57	02/21/20 01:02	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 23:57	02/21/20 00:55	125,7.3	KF



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

**SAMPLE RESULTS**

Lab ID: L2007474-13

Client ID: TP-16, S-2

Sample Location: 515 SOMERVILLE AVE., SOMERVILLE

Date Collected: 02/18/20 14:00

Date Received: 02/20/20

Field Prep: Not Specified

Sample Depth: 12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.7		%	0.100	NA	1	-	02/20/20 00:32	121,2540G	YA



Project Name: CAMBRIA HOTEL

Lab Number: L2007474

Project Number: 6735

Report Date: 02/21/20

### Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,06,08,10 Batch: WG1342487-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:20	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 01,06,08,10 Batch: WG1342489-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 02:18	02/20/20 03:27	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 12 Batch: WG1342961-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	02/20/20 23:57	02/21/20 00:54	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 12 Batch: WG1342962-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	02/20/20 23:57	02/21/20 01:02	125,7.3	KF

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007474

Report Date: 02/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,06,08,10 Batch: WG1342487-2								
Sulfide, Reactive	105		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01,06,08,10 Batch: WG1342489-2								
Cyanide, Reactive	89		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342610-1								
Specific Conductance	101		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01,06,08,10,12 Batch: WG1342613-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 12 Batch: WG1342961-2								
Sulfide, Reactive	77		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 12 Batch: WG1342962-2								
Cyanide, Reactive	61		-		30-125	-		40

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007474

**Report Date:** 02/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04,06-10,12-13 QC Batch ID: WG1342468-1 QC Sample: L2007474-01 Client ID: TP-6						
Solids, Total	85.1	84.5	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01,06,08,10,12 QC Batch ID: WG1342610-2 QC Sample: L2007474-01 Client ID: TP-6						
Specific Conductance @ 25 C	210	180	umhos/cm	15		20
General Chemistry - Westborough Lab Associated sample(s): 01,06,08,10,12 QC Batch ID: WG1342613-2 QC Sample: L2007474-01 Client ID: TP-6						
pH (H)	6.6	6.4	SU	3		5



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Serial\_No:** 02212014:56  
**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2007474-01A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-7471T-10(28),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007474-01B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-8082-10(365),REACTS(14),IGNIT-1030(14),MCP-8270-10(14),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28)
L2007474-02A	Vial MeOH preserved	B	NA		4.8	Y	Absent		MCP-8260HLW-10(14)
L2007474-02B	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-02C	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-02D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007474-03A	Glass 120ml/4oz unpreserved	A	NA		2.7	Y	Absent		MCP-8082-10(365),TS(7),MCP-PAH-10(14)
L2007474-03B	Glass 120ml/4oz unpreserved	A	NA		2.7	Y	Absent		MCP-8082-10(365),TS(7),MCP-PAH-10(14)
L2007474-04A	Glass 120ml/4oz unpreserved	A	NA		2.7	Y	Absent		MCP-8082-10(365),TS(7)
L2007474-05A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		-
L2007474-05X	Plastic 120ml HNO3 preserved Extracts	B	NA		4.8	Y	Absent		PB-CI(180)
L2007474-05X9	Tumble Vessel	B	NA		4.8	Y	Absent		-
L2007474-06A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007474-06B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),REACTS(14),MCP-8082-10(365),MCP-8270-10(14),TS(7),PH-9045(1),TPH-DRO-D(14),REACTCN(14),COND-9050(28)

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Serial\_No:**02212014:56  
**Lab Number:** L2007474  
**Report Date:** 02/21/20

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2007474-07A	Vial MeOH preserved	B	NA		4.8	Y	Absent		MCP-8260HLW-10(14)
L2007474-07B	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-07C	Vial water preserved	B	NA		4.8	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-07D	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007474-08A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007474-08B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		REACTS(14),IGNIT-1030(14),MCP-8082-10(365),MCP-8270-10(14),TS(7),PH-9045(1),TPH-DRO-D(14),REACTCN(14),COND-9050(28)
L2007474-09A	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007474-09B	Vial MeOH preserved	C	NA		2.3	Y	Absent		MCP-8260HLW-10(14)
L2007474-09C	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-09D	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-10A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007474-10B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-8082-10(365),REACTS(14),IGNIT-1030(14),MCP-8270-10(14),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28)
L2007474-11A	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007474-11B	Vial MeOH preserved	C	NA		2.3	Y	Absent		MCP-8260HLW-10(14)
L2007474-11C	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-11D	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-12A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L2007474-12B	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		IGNIT-1030(14),REACTS(14),MCP-8082-10(365),MCP-8270-10(14),TS(7),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28)

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2007474-13A	Plastic 2oz unpreserved for TS	B	NA		4.8	Y	Absent		TS(7)
L2007474-13B	Vial MeOH preserved	C	NA		2.3	Y	Absent		MCP-8260HLW-10(14)
L2007474-13C	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-13D	Vial water preserved	C	NA		2.3	Y	Absent	18-FEB-20 15:00	MCP-8260HLW-10(14)
L2007474-14A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		-
L2007474-14X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.7	Y	Absent		PB-CI(180)
L2007474-14X9	Tumble Vessel	A	NA		2.7	Y	Absent		-
L2007474-15A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		-
L2007474-15X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.7	Y	Absent		PB-CI(180)
L2007474-15X9	Tumble Vessel	A	NA		2.7	Y	Absent		-
L2007474-16A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		-
L2007474-16X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.7	Y	Absent		PB-CI(180)
L2007474-16X9	Tumble Vessel	A	NA		2.7	Y	Absent		-
L2007474-17A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		-
L2007474-17X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.7	Y	Absent		PB-CI(180)
L2007474-17X9	Tumble Vessel	A	NA		2.7	Y	Absent		-
L2007474-18A	Glass 250ml/8oz unpreserved	A	NA		2.7	Y	Absent		-
L2007474-18X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.7	Y	Absent		PB-CI(180)
L2007474-18X9	Tumble Vessel	A	NA		2.7	Y	Absent		-

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

*Report Format: Data Usability Report*

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

**Report Format:** Data Usability Report



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007474**Project Number:** 6735**Report Date:** 02/21/20**Data Qualifiers**

than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.**RE** - Analytical results are from sample re-extraction.**S** - Analytical results are from modified screening analysis.

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007474  
**Report Date:** 02/21/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 16

Published Date: 2/17/2020 10:46:05 AM

Page 1 of 1

**Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation


**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg. **EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY						PAGE 1 OF 2		Date Rec'd in Lab: 2/19/20		ALPHA Job #: L2007474																																																																																																																																																																																																																																																						
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<b>Project Name:</b> Cambria Hotel <b>Project Location:</b> 515 Somerville Ave, Somerville <b>Project #:</b> 0735 <b>Project Manager:</b> C. Foley <b>ALPHA Quote #:</b> <b>Turn-Around Time:</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> RUSH (only confirmed if pre-approved!) <b>Date Due:</b> 2 day rush 2/21/2020						<input checked="" type="checkbox"/> ADEX <input type="checkbox"/> EMAIL <input type="checkbox"/> Same as Client info <input type="checkbox"/> PO #:				<b>Regulatory Requirements &amp; Project Information Requirements</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MA MCP Analytical Methods <input type="checkbox"/> Yes <input type="checkbox"/> No CT RCP Analytical Methods <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Matrix Spike Required on this SDG? (Required for MCP Inorganics) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No GW1 Standards (Info Required for Metals & EPH with Targets) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No NPDES RGP <input type="checkbox"/> Other State /Fed Program _____ Criteria _____		<b>Additional Project Information:</b> <input checked="" type="checkbox"/> Run TCLP (if triggered)																																																																																																																																																																																																																																																				
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 <div style="display: flex; justify-content: space-between; font-size: small;"> <div>8 Walkup Drive Westboro, MA 01581 Tel: 508-898-9220</div> <div>320 Forbes Blvd Mansfield, MA 02048 Tel: 508-822-9300</div> </div>						Project Information		Report Information - Data Deliverables		Billing Information																																																																																																																																																																																																																																	
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Cambridge, MA 02140						Project #: <u>0735</u>																																																																																																																																																																																																																																					
Phone: (617) 868-1420						Project Manager: <u>C. Foley</u>																																																																																																																																																																																																																																					
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## CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab:

ALPHA Job #:

8 Walkup Drive	320 Forbes Blvd
Westboro, MA 01581	Mansfield, MA 02048
Tel: 508-898-9220	Tel: 508-622-9300

### Project Information

Project Name:	Cambria Hotel
Project Location:	515 Somerville Hotel, Somerville
Project #:	U735
Project Manager:	C Foley
ALPHA Quote #:	

### Report Information - Data Deliverables

☐ ADEx☐ EMAIL

### Billing Information

☐ Same as Client info

PO #:

## Client Information

Client: McPhail Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: (617) 868-1420

Email: C. L. Del @McPhailgeo.com

### Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)

Date Due: 2/21/2020

## Regulatory Requirements &amp; Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods  
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)  
☐ Yes ☐ No NPDES RGP  
☐ Other State /Fed Program \_\_\_\_\_ Criteria \_\_\_\_\_

Sample "Sample ID" Nomenclature: B-100, S-1

[illegible]**Container Type**

A=Amber glass  
B=Bacteria cup  
C=Cube  
D=BOD bottle  
E=Encore  
G=Glass  
O=Other  
P=Plastic  
V=Vial

## Preservative

A=None  
B=HCl  
C=HNO<sub>3</sub>  
D=H<sub>2</sub>SO<sub>4</sub>  
E=NaOH  
F=MeOH  
G=NaHSO<sub>4</sub>  
H=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I=Ascorbic Acid  
J=NH<sub>4</sub>Cl  
K=Zn Acetate  
O=Other

### Sample Material

F=Fill      S=Sand  
O=Organics      C=Clay  
N=Natural      T=Till  
GM=Glaciomarine  
GW=Groundwater

RGP Section A Inorganics :

Ammonia, Chloride, TRC, TSS, CrVI, CrIII, Total Cyanide, Total RGP Metals

## Container Type

## Preservative

Relinquished By:

Date/Time 20/10 12:20

Received By:

McPhail Associates secure sample storage for laboratory pick-up

Date/Time

06/06/00	1230
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**All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.**

DOC ID: 25188 Rev 0  
(11/28/2017)

# Method Blank Summary

## Form 4

### Volatiles

Client	: McPhail Associates	Lab Number	: L2007474
Project Name	: CAMBRIA HOTEL	Project Number	: 6735
Lab Sample ID	: WG1342775-5	Lab File ID	: V04200220A06
Instrument ID	: VOA104		
Matrix	: SOIL	Analysis Date	: 02/20/20 08:41

Client Sample No.	Lab Sample ID	Analysis Date
WG1342775-3LCS	WG1342775-3	02/20/20 07:10
WG1342775-4LCSD	WG1342775-4	02/20/20 07:39
TP-6, S-1	L2007474-02	02/20/20 12:33
TP-11, S-2	L2007474-07	02/20/20 13:01

# Method Blank Summary

## Form 4

### Volatiles

Client	: McPhail Associates	Lab Number	: L2007474
Project Name	: CAMBRIA HOTEL	Project Number	: 6735
Lab Sample ID	: WG1343024-5	Lab File ID	: V04200220N04
Instrument ID	: VOA104		
Matrix	: SOIL	Analysis Date	: 02/20/20 19:38

Client Sample No.	Lab Sample ID	Analysis Date
WG1343024-3LCS	WG1343024-3	02/20/20 18:09
WG1343024-4LCSD	WG1343024-4	02/20/20 18:38
TP-14, S-4	L2007474-09	02/20/20 20:10
TP-15, S-4	L2007474-11	02/20/20 21:11
TP-16, S-2	L2007474-13	02/20/20 21:43

# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200220A03  
 Sample No : WG1342775-2  
 Channel :

Lab Number : L2007474  
 Project Number : 6735  
 Calibration Date : 02/20/20 07:10  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	102	0
Dichlorodifluoromethane	0.23	0.231	-	-0.4	20	111	0
Chloromethane	0.315	0.324	-	-2.9	20	113	0
Vinyl chloride	0.29	0.299	-	-3.1	20	112	0
Bromomethane	40	44.511	-	-11.3	20	112	0
Chloroethane	0.16	0.16	-	0	20	112	0
Trichlorofluoromethane	0.38	0.402	-	-5.8	20	111	0
Ethyl ether	0.119	0.121	-	-1.7	20	105	0
1,1-Dichloroethene	0.244	0.254	-	-4.1	20	111	0
Carbon disulfide	0.817	0.791	-	3.2	20	110	0
Freon-113	0.258	0.272	-	-5.4	20	110	0
Acrolein	0.027	0.029*	-	-7.4	20	104	0
Methylene chloride	0.281	0.271	-	3.6	20	106	0
Acetone	40	40.485	-	-1.2	20	110	0
trans-1,2-Dichloroethene	0.276	0.285	-	-3.3	20	111	0
Methyl acetate	0.123	0.118	-	4.1	20	100	0
Methyl tert-butyl ether	0.622	0.6	-	3.5	20	102	0
tert-Butyl alcohol	0.024	0.022*	-	8.3	20	99	0
Diisopropyl ether	0.947	0.941	-	0.6	20	104	0
1,1-Dichloroethane	0.521	0.525	-	-0.8	20	107	0
Halothane	0.239	0.242	-	-1.3	20	107	0
Acrylonitrile	0.053	0.052	-	1.9	20	97	0
Ethyl tert-butyl ether	0.857	0.843	-	1.6	20	103	0
Vinyl acetate	0.543	0.526	-	3.1	20	102	0
cis-1,2-Dichloroethene	0.299	0.303	-	-1.3	20	108	0
2,2-Dichloropropane	0.399	0.394	-	1.3	20	109	0
Bromochloromethane	0.15	0.15	-	0	20	105	0
Cyclohexane	0.489	0.5	-	-2.2	20	109	0
Chloroform	0.47	0.466	-	0.9	20	107	0
Ethyl acetate	0.177	0.171	-	3.4	20	98	0
Carbon tetrachloride	0.364	0.387	-	-6.3	20	105	0
Tetrahydrofuran	0.066	0.063	-	4.5	20	97	0
Dibromofluoromethane	0.269	0.273	-	-1.5	20	102	0
1,1,1-Trichloroethane	0.435	0.416	-	4.4	20	106	0
2-Butanone	40	37.594	-	6	20	91	0
1,1-Dichloropropene	0.362	0.363	-	-0.3	20	110	0
Benzene	1.074	1.032	-	3.9	20	108	0
tert-Amyl methyl ether	0.681	0.655	-	3.8	20	102	0
1,2-Dichloroethane-d4	0.214	0.202	-	5.6	20	97	0
1,2-Dichloroethane	0.304	0.289	-	4.9	20	103	0
Methyl cyclohexane	0.454	0.459	-	-1.1	20	108	0
Trichloroethene	0.298	0.288	-	3.4	20	109	0
Dibromomethane	0.149	0.145	-	2.7	20	102	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200220A03  
 Sample No : WG1342775-2  
 Channel :

Lab Number : L2007474  
 Project Number : 6735  
 Calibration Date : 02/20/20 07:10  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.295	0.294	-	0.3	20	106	0
2-Chloroethyl vinyl ether	0.061	0.044*	-	27.9*	20	80	0
Bromodichloromethane	0.365	0.345	-	5.5	20	102	0
1,4-Dioxane	0.00168	0.002*	-	-19	20	115	0
cis-1,3-Dichloropropene	0.425	0.419	-	1.4	20	104	0
Chlorobenzene-d5	1	1	-	0	20	117	0
Toluene-d8	1.246	1.142	-	8.3	20	107	0
Toluene	0.849	0.735	-	13.4	20	107	0
4-Methyl-2-pentanone	0.095	0.083*	-	12.6	20	100	0
Tetrachloroethene	0.42	0.364	-	13.3	20	110	0
trans-1,3-Dichloropropene	0.414	0.364	-	12.1	20	104	0
Ethyl methacrylate	0.33	0.28	-	15.2	20	101	0
1,1,2-Trichloroethane	0.216	0.182	-	15.7	20	103	0
Chlorodibromomethane	0.381	0.31	-	18.6	20	101	0
1,3-Dichloropropane	0.408	0.348	-	14.7	20	103	0
1,2-Dibromoethane	0.26	0.226	-	13.1	20	104	0
2-Hexanone	0.176	0.132	-	25*	20	96	0
Chlorobenzene	1.042	0.879	-	15.6	20	108	0
Ethylbenzene	1.595	1.405	-	11.9	20	107	0
1,1,1,2-Tetrachloroethane	0.389	0.321	-	17.5	20	104	0
p/m Xylene	0.66	0.56	-	15.2	20	108	0
o Xylene	0.653	0.546	-	16.4	20	107	0
Styrene	1.045	0.886	-	15.2	20	107	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	121	0
Bromoform	0.398	0.322	-	19.1	20	99	0
Isopropylbenzene	3.008	2.558	-	15	20	108	0
4-Bromofluorobenzene	0.855	0.842	-	1.5	20	118	0
Bromobenzene	0.795	0.668	-	16	20	107	0
n-Propylbenzene	3.461	2.986	-	13.7	20	109	0
1,4-Dichlorobutane	0.858	0.659	-	23.2*	20	101	0
1,1,2,2-Tetrachloroethane	0.598	0.461	-	22.9*	20	101	0
4-Ethyltoluene	3.031	2.645	-	12.7	20	109	0
2-Chlorotoluene	2.037	1.695	-	16.8	20	107	0
1,3,5-Trimethylbenzene	2.545	2.155	-	15.3	20	109	0
1,2,3-Trichloropropane	0.413	0.329	-	20.3*	20	102	0
trans-1,4-Dichloro-2-buten	0.129	0.113	-	12.4	20	108	0
4-Chlorotoluene	2.081	1.759	-	15.5	20	109	0
tert-Butylbenzene	2.229	1.883	-	15.5	20	107	0
1,2,4-Trimethylbenzene	2.478	2.118	-	14.5	20	108	0
sec-Butylbenzene	3.304	2.8	-	15.3	20	108	0
p-Isopropyltoluene	2.837	2.46	-	13.3	20	110	0
1,3-Dichlorobenzene	1.548	1.333	-	13.9	20	109	0
1,4-Dichlorobenzene	1.569	1.33	-	15.2	20	110	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200220A03  
 Sample No : WG1342775-2  
 Channel :

Lab Number : L2007474  
 Project Number : 6735  
 Calibration Date : 02/20/20 07:10  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.739	1.533	-	11.8	20	112	0
n-Butylbenzene	2.44	2.131	-	12.7	20	112	0
1,2-Dichlorobenzene	1.435	1.204	-	16.1	20	107	0
1,2,4,5-Tetramethylbenzene	2.788	2.43	-	12.8	20	109	0
1,2-Dibromo-3-chloropropan	0.103	0.082	-	20.4*	20	98	0
1,3,5-Trichlorobenzene	1.151	1.062	-	7.7	20	116	0
Hexachlorobutadiene	0.548	0.466	-	15	20	106	0
1,2,4-Trichlorobenzene	0.963	0.885	-	8.1	20	114	0
Naphthalene	1.879	1.549	-	17.6	20	104	0
1,2,3-Trichlorobenzene	0.862	0.748	-	13.2	20	109	0

\* Value outside of QC limits.





# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200220N01  
 Sample No : WG1343024-2  
 Channel :

Lab Number : L2007474  
 Project Number : 6735  
 Calibration Date : 02/20/20 18:09  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	105	0
Dichlorodifluoromethane	0.23	0.223	-	3	20	109	0
Chloromethane	0.315	0.335	-	-6.3	20	120	-.01
Vinyl chloride	0.29	0.309	-	-6.6	20	119	0
Bromomethane	40	54.028	-	-35.1*	20	138	0
Chloroethane	0.16	0.168	-	-5	20	121	0
Trichlorofluoromethane	0.38	0.394	-	-3.7	20	112	0
Ethyl ether	0.119	0.127	-	-6.7	20	114	0
1,1-Dichloroethene	0.244	0.259	-	-6.1	20	116	0
Carbon disulfide	0.817	0.808	-	1.1	20	115	0
Freon-113	0.258	0.262	-	-1.6	20	109	0
Acrolein	0.027	0.029*	-	-7.4	20	107	0
Methylene chloride	0.281	0.288	-	-2.5	20	116	0
Acetone	40	41.227	-	-3.1	20	115	0
trans-1,2-Dichloroethene	0.276	0.296	-	-7.2	20	118	0
Methyl acetate	0.123	0.128	-	-4.1	20	110	0
Methyl tert-butyl ether	0.622	0.644	-	-3.5	20	112	0
tert-Butyl alcohol	0.024	0.023*	-	4.2	20	106	0
Diisopropyl ether	0.947	0.994	-	-5	20	113	0
1,1-Dichloroethane	0.521	0.553	-	-6.1	20	116	0
Halothane	0.239	0.25	-	-4.6	20	113	0
Acrylonitrile	0.053	0.058	-	-9.4	20	111	0
Ethyl tert-butyl ether	0.857	0.888	-	-3.6	20	112	0
Vinyl acetate	0.543	0.555	-	-2.2	20	110	0
cis-1,2-Dichloroethene	0.299	0.316	-	-5.7	20	116	0
2,2-Dichloropropane	0.399	0.401	-	-0.5	20	113	0
Bromochloromethane	0.15	0.159	-	-6	20	115	0
Cyclohexane	0.489	0.482	-	1.4	20	107	0
Chloroform	0.47	0.481	-	-2.3	20	114	0
Ethyl acetate	0.177	0.18	-	-1.7	20	107	0
Carbon tetrachloride	0.364	0.388	-	-6.6	20	108	0
Tetrahydrofuran	0.066	0.067	-	-1.5	20	106	0
Dibromofluoromethane	0.269	0.271	-	-0.7	20	104	0
1,1,1-Trichloroethane	0.435	0.425	-	2.3	20	111	0
2-Butanone	40	40.815	-	-2	20	101	0
1,1-Dichloropropene	0.362	0.368	-	-1.7	20	114	0
Benzene	1.074	1.078	-	-0.4	20	116	0
tert-Amyl methyl ether	0.681	0.695	-	-2.1	20	111	0
1,2-Dichloroethane-d4	0.214	0.205	-	4.2	20	101	0
1,2-Dichloroethane	0.304	0.304	-	0	20	111	0
Methyl cyclohexane	0.454	0.441	-	2.9	20	106	0
Trichloroethene	0.298	0.302	-	-1.3	20	117	0
Dibromomethane	0.149	0.155	-	-4	20	112	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200220N01  
 Sample No : WG1343024-2  
 Channel :

Lab Number : L2007474  
 Project Number : 6735  
 Calibration Date : 02/20/20 18:09  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.295	0.31	-	-5.1	20	114	0
2-Chloroethyl vinyl ether	0.061	0.06	-	1.6	20	114	0
Bromodichloromethane	0.365	0.362	-	0.8	20	110	0
1,4-Dioxane	0.00168	0.00186*	-	-10.7	20	110	0
cis-1,3-Dichloropropene	0.425	0.436	-	-2.6	20	112	0
Chlorobenzene-d5	1	1	-	0	20	121	0
Toluene-d8	1.246	1.134	-	9	20	110	0
Toluene	0.849	0.765	-	9.9	20	115	0
4-Methyl-2-pentanone	0.095	0.088*	-	7.4	20	109	0
Tetrachloroethene	0.42	0.369	-	12.1	20	115	0
trans-1,3-Dichloropropene	0.414	0.375	-	9.4	20	110	0
Ethyl methacrylate	0.33	0.29	-	12.1	20	108	0
1,1,2-Trichloroethane	0.216	0.193	-	10.6	20	113	0
Chlorodibromomethane	0.381	0.324	-	15	20	109	0
1,3-Dichloropropane	0.408	0.364	-	10.8	20	112	0
1,2-Dibromoethane	0.26	0.235	-	9.6	20	112	0
2-Hexanone	0.176	0.138	-	21.6*	20	104	0
Chlorobenzene	1.042	0.905	-	13.1	20	115	0
Ethylbenzene	1.595	1.451	-	9	20	114	0
1,1,1,2-Tetrachloroethane	0.389	0.33	-	15.2	20	110	0
p/m Xylene	0.66	0.578	-	12.4	20	115	0
o Xylene	0.653	0.565	-	13.5	20	115	0
Styrene	1.045	0.915	-	12.4	20	114	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	127	0
Bromoform	0.398	0.327	-	17.8	20	106	0
Isopropylbenzene	3.008	2.58	-	14.2	20	114	0
4-Bromofluorobenzene	0.855	0.832	-	2.7	20	122	0
Bromobenzene	0.795	0.681	-	14.3	20	114	0
n-Propylbenzene	3.461	2.985	-	13.8	20	114	0
1,4-Dichlorobutane	0.858	0.682	-	20.5*	20	109	0
1,1,2,2-Tetrachloroethane	0.598	0.47	-	21.4*	20	108	0
4-Ethyltoluene	3.031	2.663	-	12.1	20	115	0
2-Chlorotoluene	2.037	1.72	-	15.6	20	113	0
1,3,5-Trimethylbenzene	2.545	2.175	-	14.5	20	115	0
1,2,3-Trichloropropane	0.413	0.335	-	18.9	20	109	0
trans-1,4-Dichloro-2-buten	0.129	0.114	-	11.6	20	114	0
4-Chlorotoluene	2.081	1.782	-	14.4	20	115	0
tert-Butylbenzene	2.229	1.898	-	14.8	20	113	0
1,2,4-Trimethylbenzene	2.478	2.138	-	13.7	20	114	0
sec-Butylbenzene	3.304	2.781	-	15.8	20	112	0
p-Isopropyltoluene	2.837	2.451	-	13.6	20	114	0
1,3-Dichlorobenzene	1.548	1.35	-	12.8	20	116	0
1,4-Dichlorobenzene	1.569	1.343	-	14.4	20	116	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : McPhail Associates  
 Project Name : CAMBRIA HOTEL  
 Instrument ID : VOA104  
 Lab File ID : V04200220N01  
 Sample No : WG1343024-2  
 Channel :

Lab Number : L2007474  
 Project Number : 6735  
 Calibration Date : 02/20/20 18:09  
 Init. Calib. Date(s) : 02/05/20 02/05/20  
 Init. Calib. Times : 04:21 08:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.739	1.527	-	12.2	20	116	0
n-Butylbenzene	2.44	2.114	-	13.4	20	116	0
1,2-Dichlorobenzene	1.435	1.225	-	14.6	20	114	0
1,2,4,5-Tetramethylbenzene	2.788	2.467	-	11.5	20	116	0
1,2-Dibromo-3-chloropropan	0.103	0.083	-	19.4	20	104	0
1,3,5-Trichlorobenzene	1.151	1.062	-	7.7	20	121	0
Hexachlorobutadiene	0.548	0.464	-	15.3	20	111	0
1,2,4-Trichlorobenzene	0.963	0.884	-	8.2	20	119	0
Naphthalene	1.879	1.577	-	16.1	20	111	0
1,2,3-Trichlorobenzene	0.862	0.761	-	11.7	20	116	0

\* Value outside of QC limits.





## ANALYTICAL REPORT

Lab Number:	L2007772
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	CAMBRIA HOTEL
Project Number:	6735
Report Date:	02/26/20

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007772  
**Report Date:** 02/26/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2007772-01	TP-6	FILL	515 SOMERVILLE AVE, SOMERVILLE	02/18/20 14:00	02/19/20
L2007772-02	TP-14 0-6'	FILL	515 SOMERVILLE AVE, SOMERVILLE	02/18/20 14:00	02/19/20
L2007772-03	TP-15	FILL	515 SOMERVILLE AVE, SOMERVILLE	02/18/20 14:00	02/19/20
L2007772-04	TP-16	FILL	515 SOMERVILLE AVE, SOMERVILLE	02/18/20 14:00	02/19/20

Project Name: CAMBRIA HOTEL

Lab Number: L2007772

Project Number: 6735

Report Date: 02/26/20

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007772  
**Report Date:** 02/26/20

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007772  
**Report Date:** 02/26/20

**Case Narrative (continued)**

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

*Melissa Sturgis* Melissa Sturgis

Title: Technical Director/Representative

Date: 02/26/20



**QC OUTLIER SUMMARY REPORT****Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
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There are no QC Outliers associated with this report.

## METALS

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20**SAMPLE RESULTS**

Lab ID: L2007772-01

Date Collected: 02/18/20 14:00

Client ID: TP-6

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE, SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

TCLP/SPLP Ext. Date: 02/22/20 07:01

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	--	1	02/25/20 13:38	02/25/20 16:54	EPA 3015	1,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20**SAMPLE RESULTS**

Lab ID: L2007772-02

Date Collected: 02/18/20 14:00

Client ID: TP-14 0-6'

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE, SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

TCLP/SPLP Ext. Date: 02/22/20 07:01

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	--	1	02/25/20 13:38	02/25/20 16:58	EPA 3015	1,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20**SAMPLE RESULTS**

Lab ID: L2007772-03

Date Collected: 02/18/20 14:00

Client ID: TP-15

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE, SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

TCLP/SPLP Ext. Date: 02/22/20 07:01

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.583		mg/l	0.500	--	1	02/25/20 13:38	02/25/20 17:02	EPA 3015	1,6010D	LC



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20**SAMPLE RESULTS**

Lab ID: L2007772-04

Date Collected: 02/18/20 14:00

Client ID: TP-16

Date Received: 02/19/20

Sample Location: 515 SOMERVILLE AVE, SOMERVILLE

Field Prep: Not Specified

Sample Depth: 0-6

TCLP/SPLP Ext. Date: 02/22/20 07:01

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	4.02		mg/l	0.500	--	1	02/25/20 13:38	02/25/20 17:07	EPA 3015	1,6010D	LC



Project Name: CAMBRIA HOTEL

Lab Number: L2007772

Project Number: 6735

Report Date: 02/26/20

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-04 Batch: WG1344178-1										
Lead, TCLP	ND		mg/l	0.500	--	1	02/25/20 13:38	02/25/20 16:02	1,6010D	LC

### Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 02/21/20 07:17



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CAMBRIA HOTEL

**Project Number:** 6735

**Lab Number:** L2007772

**Report Date:** 02/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 Batch: WG1344178-2								
Lead, TCLP	97		-		75-125	-		20



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
B	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2007772-01A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		-
L2007772-01X	Plastic 120ml HNO3 preserved Extracts	B	NA		4.8	Y	Absent		PB-CI(180)
L2007772-01X9	Tumble Vessel	B	NA		4.8	Y	Absent		-
L2007772-02A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		-
L2007772-02X	Plastic 120ml HNO3 preserved Extracts	B	NA		4.8	Y	Absent		PB-CI(180)
L2007772-02X9	Tumble Vessel	B	NA		4.8	Y	Absent		-
L2007772-03A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		-
L2007772-03X	Plastic 120ml HNO3 preserved Extracts	B	NA		4.8	Y	Absent		PB-CI(180)
L2007772-03X9	Tumble Vessel	B	NA		4.8	Y	Absent		-
L2007772-04A	Glass 250ml/8oz unpreserved	B	NA		4.8	Y	Absent		-
L2007772-04X	Plastic 120ml HNO3 preserved Extracts	B	NA		4.8	Y	Absent		PB-CI(180)
L2007772-04X9	Tumble Vessel	B	NA		4.8	Y	Absent		-

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007772  
**Report Date:** 02/26/20

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

Report Format: Data Usability Report



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007772  
**Report Date:** 02/26/20

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

**Report Format:** Data Usability Report



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007772**Project Number:** 6735**Report Date:** 02/26/20**Data Qualifiers**

than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.**RE** - Analytical results are from sample re-extraction.**S** - Analytical results are from modified screening analysis.

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007772  
**Report Date:** 02/26/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 16

Department: **Quality Assurance**

Published Date: 2/17/2020 10:46:05 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

**Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg. **EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



L2007772

CHAIN OF CUSTODY										Date Rec'd in Lab: 2/19/20		ALPHA Job #: BB 2/21/20																																											
Project Information										Report Information - Data Deliverables		Billing Information																																											
Client Information										Regulatory Requirements & Project Information Requirements		Billing Information																																											
<b>Project Information</b> Project Name: <u>Cambria Hotel</u> Project Location: <u>515 Somerville Ave, Somerville</u> Project #: <u>0735</u> Project Manager: <u>C. Foley</u> ALPHA Quote #: <u></u>										<input checked="" type="checkbox"/> ADEX <input type="checkbox"/> EMAIL		<input type="checkbox"/> Same as Client info <input type="checkbox"/> PO #:																																											
<b>Client Information</b> Client: <u>McPhail Associates, LLC</u> Address: <u>2269 Massachusetts Avenue</u> <u>Cambridge, MA 02140</u> Phone: <u>(617) 868-1420</u> Email: <u>cfoley@McPhailgeo.com</u>										<input type="checkbox"/> Yes <input type="checkbox"/> No MA MCP Analytical Methods <input type="checkbox"/> Yes <input type="checkbox"/> No Matrix Spike Required on this SDG? (Required for MCP Inorganics) <input type="checkbox"/> Yes <input type="checkbox"/> No GW1 Standards (Info Required for Metals & EPH with Targets) <input type="checkbox"/> Yes <input type="checkbox"/> No NPDES RGP <input type="checkbox"/> Other State / Fed Program _____ Criteria _____		<b>Billing Information</b> PO #:																																											
<b>Turn-Around Time</b> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> RUSH (only confirmed if pre-approved!) Date Due: <u>2 day rush 2/21/2020</u>																																																							
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<b>Sample "Sample ID" Nomenclature: B-100, S-1</b>																																																							
<table border="1"> <thead> <tr> <th>ALPHA Lab ID (Lab Use Only)</th> <th>Sample ID</th> <th>Sample</th> <th>Collection</th> <th>Sampler</th> <th>Initials</th> <th>Soil Assessment Package (less VOC)</th> <th>VOCs (8280)</th> <th>Total Solids</th> <th>SVOCs (8280)</th> <th>EPH: <input type="checkbox"/> Ranges &amp; Targets <input type="checkbox"/> Ranges Only</th> <th>VPH: <input type="checkbox"/> Ranges &amp; Targets <input type="checkbox"/> Ranges Only</th> <th>TOTAL METALS: <input type="checkbox"/> RCRA6 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14</th> <th>DISSOLVED METALS: <input type="checkbox"/> RCRA6 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14</th> <th>METALS: Total Sb, Be, Ni, Ti, V, Zn</th> <th>PCBs <input type="checkbox"/> Pesticides</th> <th>RGP Section A Inorganics</th> <th>TCLP Pb</th> <th>SAMPLE INFO</th> <th>Sample Comments</th> <th>TOTAL</th> </tr> <tr> <th></th> <th></th> <th>Depth</th> <th>Material</th> <th>Date</th> <th>Time</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> </table>										ALPHA Lab ID (Lab Use Only)	Sample ID	Sample	Collection	Sampler	Initials	Soil Assessment Package (less VOC)	VOCs (8280)	Total Solids	SVOCs (8280)	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TOTAL METALS: <input type="checkbox"/> RCRA6 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14	DISSOLVED METALS: <input type="checkbox"/> RCRA6 <input type="checkbox"/> PP13 <input type="checkbox"/> MCP 14	METALS: Total Sb, Be, Ni, Ti, V, Zn	PCBs <input type="checkbox"/> Pesticides	RGP Section A Inorganics	TCLP Pb	SAMPLE INFO	Sample Comments	TOTAL			Depth	Material	Date	Time																			
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		Depth	Material	Date	Time																																																		
01	07471-01	TP-6	0-6'	F	2/18/20	2:00	MB																																																
	02	TP-10 S1	0-2'	F	2/18/20	2:00	MB																																																
	03	TP-9	0-3'	F	2/18/20	2:00	MB																																																
	04	TP-9	0-3'	F	2/18/20	2:00	MB																																																
	05	TP-9 A	0-3'	F	2/18/20	2:00	MB																																																
	06	TP-16	3-4'	F	2/18/20	2:00	PAIM																																																
	07	TP-11	0-6'	F	2/18/20	2:00	MB																																																
	08	TP-11 S-2	2-4'	F	2/18/20	2:00	MB																																																
	09	TP-14	0-6'	F	2/18/20	2:00	MB																																																
	10	TP-14 S4	5-6'	F	2/18/20	2:00	MB																																																

				**Container Type**   A=Amber glass   B=Bacteria cup   C=Cube   D=BOD bottle   E=Encore   G=Glass   O=Other   P=Plastic   V=Vial  **Sample Material**   F=Fill   O=Organics   N=Natural   GM=Glaciomarine   GW=Groundwater													
**Preservative**   A=None   B=HCl   C=HNO<sub>3</sub>   D=H<sub>2</sub>SO<sub>4</sub>   E=NaOH   F=MeOH   G=NaHSO<sub>4</sub>   H=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>   I=Ascorbic Acid   J=H<sub>2</sub>O<sub>2</sub>   K=Zn Acetate   O=Other																	
**RGP Section A Inorganics:**   Ammonia, Chloride, TRC, TSS, CrVI, CrIII, Total Cyanide, Total RGP Metals																	
**Relinquished By:**  Jon Brown   McPhail Associates secure sample storage for laboratory pick-up  2/19/20 18:00										**Date/Time**  2/19/20 3:40		**Received By:**   McPhail Associates secure sample storage for laboratory pick-up  2/19/20 16:00					
**Date/Time**  2/19/20 18:00										**Date/Time**  2/19/20 18:00		**Date/Time**  2/19/20 18:00					
**All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.**																	
**DOC ID: 25188 Rev 0 (11/28/2017)**																	



L2007772

CHAIN OF CUSTODY		PAGE 2 of 2																																																																																																																																																																	
<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div>           4 Walnut Drive            Westboro, MA 01581            Tel: 508-896-9220         </div> <div>           320 Forbes Blvd            Mansfield, MA 02048            Tel: 508-822-9300         </div> </div>		<b>Project Information</b> Project Name: <u>Cambria Hotel</u> Project Location: _____																																																																																																																																																																	
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<b>Client:</b> McPhail Associates, LLC <b>Address:</b> 2269 Massachusetts Avenue Cambridge, MA 02140 <b>Email:</b> <u>cfoley@McPhaigeo.com</u>		<b>Project #:</b> <u>0735</u> <b>Project Manager:</b> <u>C. Foley</u> <b>ALPHA Quote #:</b> _____																																																																																																																																																																	
<b>Additional Project Information:</b> <input checked="" type="checkbox"/> Run TCLP (if triggered)		<b>Project Information Requirements</b> <input type="checkbox"/> Yes <input type="checkbox"/> No MA MCP Analytical Methods <input type="checkbox"/> Yes <input type="checkbox"/> No Matrix Spike Required on this SDG? (Required for MCP Inorganics) <input type="checkbox"/> Yes <input type="checkbox"/> No GW1 Standards (Info Required for Metals & EPH with Targets) <input type="checkbox"/> Yes <input type="checkbox"/> No NPDES RGP <input type="checkbox"/> Other State Fed Program _____ Criteria _____																																																																																																																																																																	
<b>Date Due:</b> <u>2 days 2/21/2020</u> <input type="checkbox"/> Standard <input checked="" type="checkbox"/> RUSH (only confirmed if pre-approved!)		<table border="1" style="width:100%; border-collapse: collapse; font-size: 0.7em;"> <tr> <th>SVOC</th> <th>PAH</th> <th>EPH</th> <th>VPH</th> <th>TOTAL METALS</th> <th>DISSOLVED METALS</th> <th>METALS</th> <th>RGF Section A</th> <th>TCLP</th> <th>OTHER</th> </tr> <tr> <td><input type="checkbox"/> Ranges &amp; Targets</td> <td><input type="checkbox"/> Ranges Only</td> <td><input type="checkbox"/> Ranges &amp; Targets</td> <td><input type="checkbox"/> Ranges Only</td> <td><input type="checkbox"/> RCRA8 <input type="checkbox"/> PF13 <input type="checkbox"/> MCP 14</td> <td><input type="checkbox"/> RCRA8 <input type="checkbox"/> PF13 <input type="checkbox"/> MCP 14</td> <td><input type="checkbox"/> Total Sb, Bi, Ni, Tl, V, Zn</td> <td><input type="checkbox"/> Pesticides</td> <td><input type="checkbox"/> Section A Inorganics</td> <td><input type="checkbox"/> Other</td> </tr> </table>		SVOC	PAH	EPH	VPH	TOTAL METALS	DISSOLVED METALS	METALS	RGF Section A	TCLP	OTHER	<input type="checkbox"/> Ranges & Targets	<input type="checkbox"/> Ranges Only	<input type="checkbox"/> Ranges & Targets	<input type="checkbox"/> Ranges Only	<input type="checkbox"/> RCRA8 <input type="checkbox"/> PF13 <input type="checkbox"/> MCP 14	<input type="checkbox"/> RCRA8 <input type="checkbox"/> PF13 <input type="checkbox"/> MCP 14	<input type="checkbox"/> Total Sb, Bi, Ni, Tl, V, Zn	<input type="checkbox"/> Pesticides	<input type="checkbox"/> Section A Inorganics	<input type="checkbox"/> Other																																																																																																																																												
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<b>Sample Material:</b> F=Fill S=Sand O=Organics C=Clay N=Natural T=TR GM=Glaciomarine GW=Groundwater		<b>Sample Material:</b> A=None B=HCl C=HNO <sub>3</sub> D=H <sub>2</sub> SO <sub>4</sub> E=NaOH F=MeOH G=NaHSO <sub>4</sub> H=Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> I=Ascorbic Acid J=NH <sub>4</sub> Cl K=Zn Acetate O=Other																																																																																																																																																																	
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All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

DOC ID: 25188 Rev 0 (11/28/2017)





## ANALYTICAL REPORT

Lab Number:	L2007978
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	CAMBRIA HOTEL
Project Number:	6735
Report Date:	02/24/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007978  
**Report Date:** 02/24/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2007978-01	TP-9, S-3	FILL	515 SOMERVILLE AVENUE, SOMERVILLE	02/21/20 02:00	02/21/20
L2007978-02	TP-8, S-6	FILL	515 SOMERVILLE AVENUE, SOMERVILLE	02/21/20 02:00	02/21/20

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007978  
**Report Date:** 02/24/20

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.


Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 02/24/20

# **INORGANICS & MISCELLANEOUS**

Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007978

Report Date: 02/24/20

**SAMPLE RESULTS**

Lab ID: L2007978-01

Client ID: TP-9, S-3

Sample Location: 515 SOMERVILLE AVENUE, SOMERVILLE

Date Collected: 02/21/20 02:00

Date Received: 02/21/20

Field Prep: Not Specified

Sample Depth: 3-4.5

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.2		%	0.100	NA	1	-	02/22/20 10:07	121,2540G	RI



Project Name: CAMBRIA HOTEL

Project Number: 6735

Lab Number: L2007978

Report Date: 02/24/20

**SAMPLE RESULTS**

Lab ID: L2007978-02

Client ID: TP-8, S-6

Sample Location: 515 SOMERVILLE AVENUE, SOMERVILLE

Date Collected: 02/21/20 02:00

Date Received: 02/21/20

Field Prep: Not Specified

Sample Depth: 10-12

Matrix: Fill

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.2		%	0.100	NA	1	-	02/22/20 10:07	121,2540G	RI



**Lab Duplicate Analysis**  
*Batch Quality Control***Project Name:** CAMBRIA HOTEL**Project Number:** 6735**Lab Number:** L2007978**Report Date:** 02/24/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1343408-1 QC Sample: L2008018-01 Client ID: DUP Sample						
Solids, Total	89.4	90.7	%	1		20

**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007978**Project Number:** 6735**Report Date:** 02/24/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information****Cooler**                      **Custody Seal**

A                                  Absent

**Container Information****Container ID**    **Container Type**

L2007978-01A      Plastic 2oz unpreserved for TS

L2007978-02A      Plastic 2oz unpreserved for TS

<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
A	NA		4.5	Y	Absent		TS(7)
A	NA		4.5	Y	Absent		TS(7)



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007978  
**Report Date:** 02/24/20

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

Report Format: Data Usability Report



**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007978  
**Report Date:** 02/24/20

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less

**Report Format:** Data Usability Report



**Project Name:** CAMBRIA HOTEL**Lab Number:** L2007978**Project Number:** 6735**Report Date:** 02/24/20**Data Qualifiers**

than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.**RE** - Analytical results are from sample re-extraction.**S** - Analytical results are from modified screening analysis.

**Project Name:** CAMBRIA HOTEL  
**Project Number:** 6735

**Lab Number:** L2007978  
**Report Date:** 02/24/20

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 16

Department: **Quality Assurance**

Published Date: 2/17/2020 10:46:05 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

## Certification Information

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The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.**EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

[illegible]



**APPENDIX D:**

**LABORATORY DATA REPORT – SOIL (CLEAN  
PROPERTIES, INC.)**





Thursday, December 12, 2019

Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
SDG ID: GCE67594  
Sample ID#s: CE67594 - CE67605

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller  
Laboratory Director



**NELAC - #NY11301**  
**CT Lab Registration #PH-0618**  
**MA Lab Registration #M-CT007**  
**ME Lab Registration #CT-007**  
**NH Lab Registration #213693-A,B**

**NJ Lab Registration #CT-003**  
**NY Lab Registration #11301**  
**PA Lab Registration #68-03530**  
**RI Lab Registration #63**  
**UT Lab Registration #CT00007**  
**VT Lab Registration #VT11301**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## SDG Comments

December 12, 2019

SDG I.D.: GCE67594

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Version 2: Per client request TCLP Lead was added on.



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

December 12, 2019

SDG I.D.: GCE67594

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA

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Client Id	Lab Id	Matrix
CP-5W3	CE67594	SOIL
CP-5W6	CE67595	SOIL
CP-5W9	CE67596	SOIL
CP-5E3	CE67597	SOIL
CP-5E6	CE67598	SOIL
CP-5E9	CE67599	SOIL
CP-5N3	CE67600	SOIL
CP-5N6	CE67601	SOIL
CP-5N9	CE67602	SOIL
CP-5S3	CE67603	SOIL
CP-5S6	CE67604	SOIL
CP-5S9	CE67605	SOIL



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67594

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5W3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	4.65	0.70	mg/Kg	1	11/28/19	TH	SW6010D
Barium	61.7	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.40	0.28	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	0.60	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	15.1	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.60	0.07	mg/Kg	5	12/02/19	RS	SW7471B
Nickel	10.2	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Lead	173	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	1.11	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.2	3.2	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	26.7	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	153	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	89		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	193	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/26/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/26/19	BJA	SW846-Ignit
pH at 25C - Soil	7.69	1.00	pH Units	1	11/25/19 21:07	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	MM/ALE	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/01/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	120	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	78		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	89		%	2	12/02/19	SC	30 - 150 %
% TCMX	75		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	78		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	70		%	5	11/27/19	JRB	50 - 150 %
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### **Volatiles**

1,1,1,2-Tetrachloroethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,1,1-Trichloroethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.3	ug/Kg	1	11/27/19	HM	SW8260C
1,1,2-Trichloroethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloroethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloroethene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloropropene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2,3-Trichlorobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2,3-Trichloropropane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2,4-Trichlorobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2,4-Trimethylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dibromoethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichlorobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichloroethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichloropropane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,3,5-Trimethylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,3-Dichlorobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichloropropane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
1,4-Dichlorobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
2,2-Dichloropropane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
2-Chlorotoluene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
2-Hexanone	ND	28	ug/Kg	1	11/27/19	HM	SW8260C
2-Isopropyltoluene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
4-Chlorotoluene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
4-Methyl-2-pentanone	ND	28	ug/Kg	1	11/27/19	HM	SW8260C
Acetone	ND	280	ug/Kg	1	11/27/19	HM	SW8260C
Acrylonitrile	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Benzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Bromobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Bromochloromethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Bromodichloromethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Bromoform	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Bromomethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Carbon Disulfide	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Carbon tetrachloride	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Chlorobenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Chloroethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Chloroform	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Chloromethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
cis-1,2-Dichloroethene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
cis-1,3-Dichloropropene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Dibromochloromethane	ND	3.3	ug/Kg	1	11/27/19	HM	SW8260C
Dibromomethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Dichlorodifluoromethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Ethylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Hexachlorobutadiene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Isopropylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
m&p-Xylene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Methyl Ethyl Ketone	ND	33	ug/Kg	1	11/27/19	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	11/27/19	HM	SW8260C
Methylene chloride	ND	11	ug/Kg	1	11/27/19	HM	SW8260C
Naphthalene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
n-Butylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
n-Propylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
o-Xylene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
p-Isopropyltoluene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
sec-Butylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Styrene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
tert-Butylbenzene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Tetrachloroethene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	11/27/19	HM	SW8260C
Toluene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Total Xylenes	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,2-Dichloroethene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,3-Dichloropropene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	11/27/19	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichloroethene	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Trichlorofluoromethane	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
Trichlorotrifluoroethane	ND	11	ug/Kg	1	11/27/19	HM	SW8260C
Vinyl chloride	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	98		%	1	11/27/19	HM	70 - 130 %
% Bromofluorobenzene	91		%	1	11/27/19	HM	70 - 130 %
% Dibromofluoromethane	99		%	1	11/27/19	HM	70 - 130 %
% Toluene-d8	96		%	1	11/27/19	HM	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	110	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Diethyl ether	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Di-isopropyl ether	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	5.6	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthene	410	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Aniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Anthracene	960	260	ug/Kg	1	11/27/19	WB	SW8270D
Benz(a)anthracene	2900	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(a)pyrene	2900	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(b)fluoranthene	2400	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(ghi)perylene	1500	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(k)fluoranthene	2600	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	11/27/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Carbazole	520	370	ug/Kg	1	11/27/19	WB	SW8270D
Chrysene	2900	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenz(a,h)anthracene	360	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenzofuran	280	260	ug/Kg	1	11/27/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluoranthene	4500	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluorene	330	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1700	260	ug/Kg	1	11/27/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Phenanthrene	3900	260	ug/Kg	1	11/27/19	WB	SW8270D
Phenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyrene	4200	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	91		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorobiphenyl	73		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorophenol	71		%	1	11/27/19	WB	30 - 130 %
% Nitrobenzene-d5	77		%	1	11/27/19	WB	30 - 130 %
% Phenol-d5	82		%	1	11/27/19	WB	30 - 130 %
% Terphenyl-d14	65		%	1	11/27/19	WB	30 - 130 %
Field Extraction	Completed				11/21/19		SW5035A



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

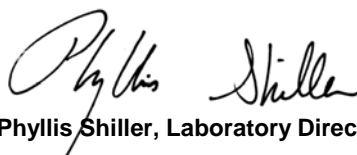
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date Time  
11/21/19 15:00  
11/25/19 18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67595

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5W6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	4.07	0.68	mg/Kg	1	11/28/19	TH	SW6010D
Barium	53.6	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.37	0.27	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	0.80	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	16.9	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.30	0.07	mg/Kg	5	12/02/19	RS	SW7471B
Nickel	10.2	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Lead	200	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	0.76	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.0	3.0	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	28.2	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	196	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	89		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	281	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/26/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/26/19	BJA	SW846-Ignit
pH at 25C - Soil	7.53	1.00	pH Units	1	11/25/19 21:07	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	MM/ALE	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/01/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	64		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	72		%	2	12/02/19	SC	30 - 150 %
% TCMX	66		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	70		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	11/27/19	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	11/27/19	JRB	SW8015D DRO
Other Oil	**	56	mg/kg	1	11/27/19	JRB	SW8015D DRO
Unidentified	130	56	mg/kg	1	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	60		%	1	11/27/19	JRB	50 - 150 %
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### **Volatiles**

1,1,1,2-Tetrachloroethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,1,1-Trichloroethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.8	ug/Kg	1	11/27/19	HM	SW8260C
1,1,2-Trichloroethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloroethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloroethene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloropropene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2,3-Trichlorobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2,3-Trichloropropane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2,4-Trichlorobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2,4-Trimethylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dibromoethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichlorobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichloroethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichloropropane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,3,5-Trimethylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,3-Dichlorobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichloropropane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
1,4-Dichlorobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
2,2-Dichloropropane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
2-Chlorotoluene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
2-Hexanone	ND	32	ug/Kg	1	11/27/19	HM	SW8260C
2-Isopropyltoluene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
4-Chlorotoluene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
4-Methyl-2-pentanone	ND	32	ug/Kg	1	11/27/19	HM	SW8260C
Acetone	ND	320	ug/Kg	1	11/27/19	HM	SW8260C
Acrylonitrile	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Benzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Bromobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Bromochloromethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Bromodichloromethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Bromoform	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Bromomethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Carbon Disulfide	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Carbon tetrachloride	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Chlorobenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Chloroethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Chloroform	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Chloromethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
cis-1,2-Dichloroethene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
cis-1,3-Dichloropropene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Dibromochloromethane	ND	3.8	ug/Kg	1	11/27/19	HM	SW8260C
Dibromomethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Dichlorodifluoromethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Ethylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Hexachlorobutadiene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Isopropylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
m&p-Xylene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Methyl Ethyl Ketone	ND	38	ug/Kg	1	11/27/19	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	11/27/19	HM	SW8260C
Methylene chloride	ND	13	ug/Kg	1	11/27/19	HM	SW8260C
Naphthalene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
n-Butylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
n-Propylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
o-Xylene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
p-Isopropyltoluene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
sec-Butylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Styrene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
tert-Butylbenzene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Tetrachloroethene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	11/27/19	HM	SW8260C
Toluene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Total Xylenes	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,2-Dichloroethene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,3-Dichloropropene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	11/27/19	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichloroethene	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Trichlorofluoromethane	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
Trichlorotrifluoroethane	ND	13	ug/Kg	1	11/27/19	HM	SW8260C
Vinyl chloride	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	98		%	1	11/27/19	HM	70 - 130 %
% Bromofluorobenzene	90		%	1	11/27/19	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	11/27/19	HM	70 - 130 %
% Toluene-d8	97		%	1	11/27/19	HM	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	130	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Diethyl ether	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Di-isopropyl ether	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	6.4	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthene	300	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Aniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Anthracene	710	260	ug/Kg	1	11/27/19	WB	SW8270D
Benz(a)anthracene	2400	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(a)pyrene	2700	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(b)fluoranthene	2000	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(ghi)perylene	1500	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(k)fluoranthene	2100	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzoic acid	ND	740	ug/Kg	1	11/27/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Carbazole	390	370	ug/Kg	1	11/27/19	WB	SW8270D
Chrysene	2500	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenz(a,h)anthracene	430	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluoranthene	4100	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1800	260	ug/Kg	1	11/27/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Phenanthrene	3100	260	ug/Kg	1	11/27/19	WB	SW8270D
Phenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyrene	3800	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	93		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorobiphenyl	76		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorophenol	75		%	1	11/27/19	WB	30 - 130 %
% Nitrobenzene-d5	83		%	1	11/27/19	WB	30 - 130 %
% Phenol-d5	89		%	1	11/27/19	WB	30 - 130 %
% Terphenyl-d14	66		%	1	11/27/19	WB	30 - 130 %
Field Extraction	Completed				11/21/19		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

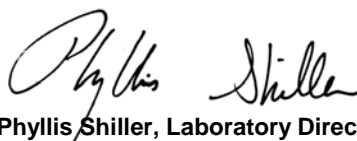
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### TPH Comment:

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C14 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date Time  
11/21/19 15:00  
11/25/19 18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67596

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5W9

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	1.25	0.70	mg/Kg	1	11/28/19	TH	SW6010D
Barium	21.8	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	< 0.28	0.28	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	11.5	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	< 0.07	0.07	mg/Kg	5	12/02/19	RS	SW7471B
Nickel	8.78	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Lead	7.31	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
Thallium	< 3.1	3.1	mg/Kg	1	11/28/19	TH	SW6010D
Vanadium	22.0	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	25.6	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	91		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	272	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/26/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/26/19	BJA	SW846-Ignit
pH at 25C - Soil	7.30	1.00	pH Units	1	11/25/19 21:07	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/01/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	67		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	68		%	2	12/02/19	SC	30 - 150 %
% TCMX	67		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	70		%	2	12/02/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Other Oil	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	59		%	1	11/27/19	JRB	50 - 150 %
<b><u>Volatiles</u></b>							
1,1,1,2-Tetrachloroethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,1,1-Trichloroethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.6	ug/Kg	1	11/27/19	HM	SW8260C
1,1,2-Trichloroethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloroethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloroethene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,1-Dichloropropene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2,3-Trichlorobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2,3-Trichloropropane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2,4-Trichlorobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2,4-Trimethylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dibromoethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichlorobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichloroethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,2-Dichloropropane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,3,5-Trimethylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,3-Dichlorobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,3-Dichloropropane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
1,4-Dichlorobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
2,2-Dichloropropane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
2-Hexanone	ND	21	ug/Kg	1	11/27/19	HM	SW8260C
2-Isopropyltoluene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
4-Chlorotoluene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
4-Methyl-2-pentanone	ND	21	ug/Kg	1	11/27/19	HM	SW8260C
Acetone	ND	210	ug/Kg	1	11/27/19	HM	SW8260C
Acrylonitrile	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Benzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Bromobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Bromochloromethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Bromodichloromethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Bromoform	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Bromomethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Carbon Disulfide	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Carbon tetrachloride	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Chlorobenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Chloroethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Chloroform	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Chloromethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
cis-1,2-Dichloroethene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
cis-1,3-Dichloropropene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Dibromochloromethane	ND	2.6	ug/Kg	1	11/27/19	HM	SW8260C
Dibromomethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Dichlorodifluoromethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Ethylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Hexachlorobutadiene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Isopropylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
m&p-Xylene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Methyl Ethyl Ketone	ND	26	ug/Kg	1	11/27/19	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	8.6	ug/Kg	1	11/27/19	HM	SW8260C
Methylene chloride	ND	8.6	ug/Kg	1	11/27/19	HM	SW8260C
Naphthalene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
n-Butylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
n-Propylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
o-Xylene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
p-Isopropyltoluene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
sec-Butylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Styrene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
tert-Butylbenzene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Tetrachloroethene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Tetrahydrofuran (THF)	ND	8.6	ug/Kg	1	11/27/19	HM	SW8260C
Toluene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Total Xylenes	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,2-Dichloroethene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,3-Dichloropropene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	8.6	ug/Kg	1	11/27/19	HM	SW8260C
Trichloroethene	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Trichlorofluoromethane	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
Trichlorotrifluoroethane	ND	8.6	ug/Kg	1	11/27/19	HM	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	96		%	1	11/27/19	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	11/27/19	HM	70 - 130 %
% Dibromofluoromethane	98		%	1	11/27/19	HM	70 - 130 %
% Toluene-d8	98		%	1	11/27/19	HM	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	86	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Diethyl ether	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Di-isopropyl ether	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
tert-amyl methyl ether	ND	4.3	ug/Kg	1	11/27/19	HM	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitroaniline	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
3-Nitroaniline	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Acetophenone	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Aniline	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benidine	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(a)pyrene	490	250	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(b)fluoranthene	300	250	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(ghi)perylene	340	250	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(k)fluoranthene	290	250	ug/Kg	1	11/27/19	WB	SW8270D
Benzoic acid	ND	720	ug/Kg	1	11/27/19	WB	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Carbazole	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Chrysene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Fluoranthene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	400	250	ug/Kg	1	11/27/19	WB	SW8270D
Isophorone	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodimethylamine	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Pentachloronitrobenzene	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
Phenanthrene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Phenol	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Pyrene	ND	250	ug/Kg	1	11/27/19	WB	SW8270D
Pyridine	ND	360	ug/Kg	1	11/27/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	83		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorobiphenyl	69		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorophenol	65		%	1	11/27/19	WB	30 - 130 %
% Nitrobenzene-d5	76		%	1	11/27/19	WB	30 - 130 %
% Phenol-d5	80		%	1	11/27/19	WB	30 - 130 %
% Terphenyl-d14	62		%	1	11/27/19	WB	30 - 130 %
Field Extraction	Completed				11/21/19		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

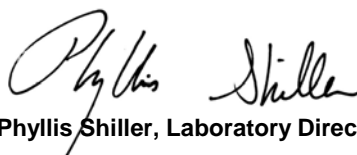
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67597

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5E3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	6.08	0.79	mg/Kg	1	11/28/19	TH	SW6010D
Barium	265	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.38	0.32	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	0.51	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	13.3	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.89	0.08	mg/Kg	5	12/02/19	RS	SW7471B
Nickel	10.7	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Lead	399	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 4.0	4.0	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	0.72	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.6	3.6	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	24.8	0.40	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	228	0.8	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	84		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	514	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.46	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/01/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1221	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1232	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1242	1900	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1248	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1254	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1260	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1262	ND	390	ug/Kg	10	12/03/19	SC	SW8082A
PCB-1268	ND	390	ug/Kg	10	12/03/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	104		%	10	12/03/19	SC	30 - 150 %
% DCBP (Confirmation)	93		%	10	12/03/19	SC	30 - 150 %
% TCMX	104		%	10	12/03/19	SC	30 - 150 %
% TCMX (Confirmation)	95		%	10	12/03/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	ND	300	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	75		%	5	11/27/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	11/27/19	KCA	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Acenaphthene	940	280	ug/Kg	1	11/27/19	KCA	SW8270D
Acenaphthylene	750	280	ug/Kg	1	11/27/19	KCA	SW8270D
Acetophenone	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Aniline	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
Anthracene	5200	280	ug/Kg	1	11/27/19	KCA	SW8270D
Benz(a)anthracene	33000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Benzidine	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Benzo(a)pyrene	32000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	26000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	15000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	26000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Benzoic acid	ND	790	ug/Kg	1	11/27/19	KCA	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	1400	280	ug/Kg	1	11/27/19	KCA	SW8270D
Carbazole	1200	390	ug/Kg	1	11/27/19	KCA	SW8270D
Chrysene	30000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	4900	280	ug/Kg	1	11/27/19	KCA	SW8270D
Dibenzofuran	450	280	ug/Kg	1	11/27/19	KCA	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Fluoranthene	51000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Fluorene	1200	280	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	18000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Isophorone	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Naphthalene	360	280	ug/Kg	1	11/27/19	KCA	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
Phenanthrene	23000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Phenol	ND	280	ug/Kg	1	11/27/19	KCA	SW8270D
Pyrene	48000	2800	ug/Kg	10	12/02/19	KCA	SW8270D
Pyridine	ND	390	ug/Kg	1	11/27/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	86		%	1	11/27/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	69		%	1	11/27/19	KCA	30 - 130 %
% 2-Fluorophenol	69		%	1	11/27/19	KCA	30 - 130 %
% Nitrobenzene-d5	78		%	1	11/27/19	KCA	30 - 130 %
% Phenol-d5	81		%	1	11/27/19	KCA	30 - 130 %
% Terphenyl-d14	63		%	1	11/27/19	KCA	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

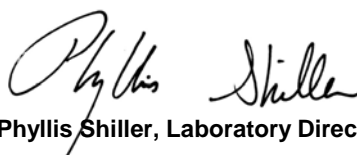
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

TCLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67598

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5E6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	0.45	0.45	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	9.53	0.89	mg/Kg	1	11/28/19	TH	SW6010D
Barium	324	0.45	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	< 0.36	0.36	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	1.53	0.45	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	23.1	0.45	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	3.49	0.09	mg/Kg	5	12/03/19	RS	SW7471B
Nickel	12.6	0.45	mg/Kg	1	11/28/19	TH	SW6010D
Lead	3520	4.5	mg/Kg	10	12/03/19	EK	SW6010D
Antimony	< 4.5	4.5	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.8	1.8	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	3.13	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 4.0	4.0	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	25.2	0.45	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	594	8.9	mg/Kg	10	12/03/19	EK	SW6010D
Percent Solid	72		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	218	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.25	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	510	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	91	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	91	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	76		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	73		%	2	12/02/19	SC	30 - 150 %
% TCMX	69		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	63		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	340	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	340	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	340	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	340	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	340	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	**	340	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	1200	340	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	Diluted Out		%	5	11/27/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dichlorophenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dimethylphenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dinitrophenol	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2-Chloronaphthalene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2-Chlorophenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2-Methylnaphthalene	730	320	ug/Kg	1	11/27/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
2-Nitroaniline	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
3-Nitroaniline	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
4-Chloroaniline	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
4-Nitroaniline	ND	730	ug/Kg	1	11/27/19	KCA	SW8270D
4-Nitrophenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Acenaphthene	5900	320	ug/Kg	1	11/27/19	KCA	SW8270D
Acenaphthylene	1100	320	ug/Kg	1	11/27/19	KCA	SW8270D
Acetophenone	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Aniline	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
Anthracene	7400	320	ug/Kg	1	11/27/19	KCA	SW8270D
Benz(a)anthracene	51000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Benzidine	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Benzo(a)pyrene	52000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	44000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	26000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	36000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Benzoic acid	ND	920	ug/Kg	1	11/27/19	KCA	SW8270D
Benzyl butyl phthalate	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Carbazole	5200	460	ug/Kg	1	11/27/19	KCA	SW8270D
Chrysene	49000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	8800	320	ug/Kg	1	11/27/19	KCA	SW8270D
Dibenzofuran	2300	320	ug/Kg	1	11/27/19	KCA	SW8270D
Diethyl phthalate	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Dimethylphthalate	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Di-n-butylphthalate	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
Di-n-octylphthalate	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Fluoranthene	80000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Fluorene	4500	320	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachlorobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachlorobutadiene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Hexachloroethane	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	31000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Isophorone	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Naphthalene	1500	320	ug/Kg	1	11/27/19	KCA	SW8270D
Nitrobenzene	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
Pentachlorophenol	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
Phenanthrene	56000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Phenol	ND	320	ug/Kg	1	11/27/19	KCA	SW8270D
Pyrene	75000	3200	ug/Kg	10	12/02/19	KCA	SW8270D
Pyridine	ND	460	ug/Kg	1	11/27/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	103		%	1	11/27/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	80		%	1	11/27/19	KCA	30 - 130 %
% 2-Fluorophenol	73		%	1	11/27/19	KCA	30 - 130 %
% Nitrobenzene-d5	83		%	1	11/27/19	KCA	30 - 130 %
% Phenol-d5	86		%	1	11/27/19	KCA	30 - 130 %
% Terphenyl-d14	75		%	1	11/27/19	KCA	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/02/19	KCA	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### TPH Comment:


\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C16 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

#### TCLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date Time

11/21/19 15:00  
11/25/19 18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67599

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5E9

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	1.38	0.68	mg/Kg	1	11/28/19	TH	SW6010D
Barium	8.42	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	< 0.27	0.27	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	< 0.34	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	11.5	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/03/19	RS	SW7471B
Nickel	7.71	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Lead	2.96	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
Thallium	< 3.0	3.0	mg/Kg	1	11/28/19	TH	SW6010D
Vanadium	21.1	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	19.5	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	90		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	1180	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.48	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1254	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/03/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	81		%	2	12/03/19	SC	30 - 150 %
% DCBP (Confirmation)	79		%	2	12/03/19	SC	30 - 150 %
% TCMX	76		%	2	12/03/19	SC	30 - 150 %
% TCMX (Confirmation)	75		%	2	12/03/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
Other Oil	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
Unidentified	ND	55	mg/kg	1	11/27/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	76		%	1	11/27/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitroaniline	ND	580	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Aniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzdine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	11/27/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	76		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorobiphenyl	66		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorophenol	66		%	1	11/27/19	WB	30 - 130 %
% Nitrobenzene-d5	70		%	1	11/27/19	WB	30 - 130 %
% Phenol-d5	74		%	1	11/27/19	WB	30 - 130 %
% Terphenyl-d14	79		%	1	11/27/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67600

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5N3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.33	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	6.19	0.67	mg/Kg	1	11/28/19	TH	SW6010D
Barium	182	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.44	0.27	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	1.67	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	19.2	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.37	0.07	mg/Kg	5	12/03/19	RS	SW7471B
Nickel	13.9	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Lead	515	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.3	3.3	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	0.92	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.0	3.0	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	31.8	0.33	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	307	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	88		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	251	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.43	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/26/19	KK/EE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	160	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	72		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	63		%	2	12/02/19	SC	30 - 150 %
% TCMX	69		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	59		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	79		%	5	11/27/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	11/27/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthene	310	260	ug/Kg	1	11/27/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Aniline	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Anthracene	850	260	ug/Kg	1	11/27/19	WB	SW8270D
Benz(a)anthracene	4100	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(a)pyrene	7000	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(b)fluoranthene	5900	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(ghi)perylene	2900	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzo(k)fluoranthene	5000	260	ug/Kg	1	11/27/19	WB	SW8270D
Benzoic acid	ND	750	ug/Kg	1	11/27/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Carbazole	380	370	ug/Kg	1	11/27/19	WB	SW8270D
Chrysene	4400	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenz(a,h)anthracene	800	260	ug/Kg	1	11/27/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluoranthene	4900	260	ug/Kg	1	11/27/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	3300	260	ug/Kg	1	11/27/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
Phenanthrene	3600	260	ug/Kg	1	11/27/19	WB	SW8270D
Phenol	ND	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyrene	4700	260	ug/Kg	1	11/27/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	11/27/19	WB	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	71		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorobiphenyl	64		%	1	11/27/19	WB	30 - 130 %
% 2-Fluorophenol	58		%	1	11/27/19	WB	30 - 130 %
% Nitrobenzene-d5	65		%	1	11/27/19	WB	30 - 130 %
% Phenol-d5	68		%	1	11/27/19	WB	30 - 130 %
% Terphenyl-d14	56		%	1	11/27/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

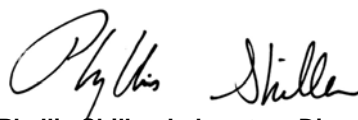
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

TCLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67601

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5N6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	5.12	0.75	mg/Kg	1	11/28/19	TH	SW6010D
Barium	118	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.53	0.30	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	4.67	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	19.4	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.32	0.07	mg/Kg	5	12/03/19	RS	SW7471B
Nickel	17.5	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Lead	206	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	2.40	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.4	3.4	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	31.1	0.37	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	444	7.5	mg/Kg	10	12/03/19	EK	SW6010D
Percent Solid	86		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	182	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.29	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	230	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	77	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	77	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	73		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	65		%	2	12/02/19	SC	30 - 150 %
% TCMX	65		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	57		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	102		%	5	11/27/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2-Methylnaphthalene	750	270	ug/Kg	1	12/02/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/02/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
4-Nitroaniline	ND	620	ug/Kg	1	12/02/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Acenaphthene	3000	270	ug/Kg	1	12/02/19	WB	SW8270D
Acenaphthylene	830	270	ug/Kg	1	12/02/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
Anthracene	13000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Benz(a)anthracene	34000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Benzo(a)pyrene	32000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Benzo(b)fluoranthene	26000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Benzo(ghi)perylene	18000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Benzo(k)fluoranthene	23000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Benzoic acid	ND	780	ug/Kg	1	12/02/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Carbazole	2800	390	ug/Kg	1	12/02/19	WB	SW8270D
Chrysene	31000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Dibenz(a,h)anthracene	4000	270	ug/Kg	1	12/02/19	WB	SW8270D
Dibenzofuran	2000	270	ug/Kg	1	12/02/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Fluoranthene	61000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Fluorene	3000	270	ug/Kg	1	12/02/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	20000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Naphthalene	1300	270	ug/Kg	1	12/02/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/02/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
Phenanthrene	48000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/02/19	WB	SW8270D
Pyrene	55000	2700	ug/Kg	10	12/06/19	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/02/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	103		%	1	12/02/19	WB	30 - 130 %
% 2-Fluorobiphenyl	69		%	1	12/02/19	WB	30 - 130 %
% 2-Fluorophenol	61		%	1	12/02/19	WB	30 - 130 %
% Nitrobenzene-d5	79		%	1	12/02/19	WB	30 - 130 %
% Phenol-d5	74		%	1	12/02/19	WB	30 - 130 %
% Terphenyl-d14	61		%	1	12/02/19	WB	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/06/19	WB	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/06/19	WB	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/06/19	WB	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/06/19	WB	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/06/19	WB	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/06/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

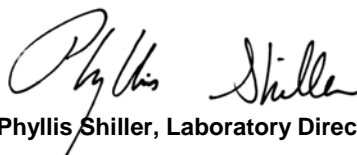
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

TCLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date Time

11/21/19 15:00  
11/25/19 18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67602

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5N9

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	1.42	0.67	mg/Kg	1	11/28/19	TH	SW6010D
Barium	19.1	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	< 0.27	0.27	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	0.70	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	10.1	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	< 0.07	0.07	mg/Kg	5	12/03/19	RS	SW7471B
Nickel	7.74	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Lead	26.6	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	11/28/19	TH	SW6010D
Thallium	< 3.0	3.0	mg/Kg	1	11/28/19	TH	SW6010D
Vanadium	20.1	0.34	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	55.7	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	93		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	164	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.48	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1254	1300	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	12/04/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	113		%	10	12/04/19	SC	30 - 150 %
% DCBP (Confirmation)	119		%	10	12/04/19	SC	30 - 150 %
% TCMX	104		%	10	12/04/19	SC	30 - 150 %
% TCMX (Confirmation)	106		%	10	12/04/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
Kerosene	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
Other Oil	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
Unidentified	ND	52	mg/kg	1	11/27/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	64		%	1	11/27/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitroaniline	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Aniline	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benz(a)anthracene	450	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzidine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(a)pyrene	490	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	370	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	300	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	350	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzoic acid	ND	710	ug/Kg	1	12/02/19	KCA	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Carbazole	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Chrysene	440	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Fluoranthene	770	250	ug/Kg	1	12/02/19	KCA	SW8270D
Fluorene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	310	250	ug/Kg	1	12/02/19	KCA	SW8270D
Isophorone	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachloronitrobenzene	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Phenanthrene	480	250	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Pyrene	660	250	ug/Kg	1	12/02/19	KCA	SW8270D
Pyridine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	92		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	71		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol	59		%	1	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5	72		%	1	12/02/19	KCA	30 - 130 %
% Phenol-d5	68		%	1	12/02/19	KCA	30 - 130 %
% Terphenyl-d14	59		%	1	12/02/19	KCA	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67603

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5S3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	6.10	0.69	mg/Kg	1	11/28/19	TH	SW6010D
Barium	71.2	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.44	0.28	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	0.56	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	21.7	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.41	0.08	mg/Kg	5	12/03/19	RS	SW7471B
Nickel	11.6	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Lead	191	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	2.15	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.1	3.1	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	26.1	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	118	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	88		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	261	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.37	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	150	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	63		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	65		%	2	12/02/19	SC	30 - 150 %
% TCMX	67		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	68		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	ND	280	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	77		%	5	11/27/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/03/19	KCA	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Acenaphthene	370	260	ug/Kg	1	12/03/19	KCA	SW8270D
Acenaphthylene	540	260	ug/Kg	1	12/03/19	KCA	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Aniline	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
Anthracene	1500	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benz(a)anthracene	6900	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzidine	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(a)pyrene	6600	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(b)fluoranthene	5500	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(ghi)perylene	2700	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(k)fluoranthene	4400	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzoic acid	ND	740	ug/Kg	1	12/03/19	KCA	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	380	260	ug/Kg	1	12/03/19	KCA	SW8270D
Carbazole	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
Chrysene	6300	260	ug/Kg	1	12/03/19	KCA	SW8270D
Dibenz(a,h)anthracene	940	260	ug/Kg	1	12/03/19	KCA	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Fluoranthene	11000	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Fluorene	380	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	3200	260	ug/Kg	1	12/03/19	KCA	SW8270D
Isophorone	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
Phenanthrene	6300	260	ug/Kg	1	12/03/19	KCA	SW8270D
Phenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Pyrene	10000	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Pyridine	ND	370	ug/Kg	1	12/03/19	KCA	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	114		%	1	12/03/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	79		%	1	12/03/19	KCA	30 - 130 %
% 2-Fluorophenol	67		%	1	12/03/19	KCA	30 - 130 %
% Nitrobenzene-d5	81		%	1	12/03/19	KCA	30 - 130 %
% Phenol-d5	77		%	1	12/03/19	KCA	30 - 130 %
% Terphenyl-d14	60		%	1	12/03/19	KCA	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/21/19	15:00
11/25/19	18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67604

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5S6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	4.62	0.71	mg/Kg	1	11/28/19	TH	SW6010D
Barium	135	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	0.40	0.28	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	1.85	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	16.8	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.99	0.08	mg/Kg	5	12/03/19	RS	SW7471B
Nickel	10.7	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Lead	558	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Lead	0.80	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.2	3.2	mg/Kg	1	11/28/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	26.2	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	289	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	83		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	533	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.42	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1221	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1232	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1242	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1248	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1254	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1260	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1262	ND	400	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1268	ND	400	ug/Kg	10	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	88		%	10	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	83		%	10	12/02/19	SC	30 - 150 %
% TCMX	87		%	10	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	80		%	10	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Kerosene	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Other Oil	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO
Unidentified	ND	290	mg/kg	5	11/27/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	98		%	5	11/27/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2-Methylnaphthalene	300	280	ug/Kg	1	12/03/19	AW	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/03/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/03/19	AW	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Acenaphthene	1400	280	ug/Kg	1	12/03/19	AW	SW8270D
Acenaphthylene	470	280	ug/Kg	1	12/03/19	AW	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Aniline	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
Anthracene	2700	280	ug/Kg	1	12/03/19	AW	SW8270D
Benz(a)anthracene	7700	280	ug/Kg	1	12/03/19	AW	SW8270D
Benzidine	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Benzo(a)pyrene	7800	280	ug/Kg	1	12/03/19	AW	SW8270D
Benzo(b)fluoranthene	7200	280	ug/Kg	1	12/03/19	AW	SW8270D
Benzo(ghi)perylene	3900	280	ug/Kg	1	12/03/19	AW	SW8270D
Benzo(k)fluoranthene	4800	280	ug/Kg	1	12/03/19	AW	SW8270D
Benzoic acid	ND	790	ug/Kg	1	12/03/19	AW	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Carbazole	1200	390	ug/Kg	1	12/03/19	AW	SW8270D
Chrysene	7400	280	ug/Kg	1	12/03/19	AW	SW8270D
Dibenz(a,h)anthracene	350	280	ug/Kg	1	12/03/19	AW	SW8270D
Dibenzofuran	830	280	ug/Kg	1	12/03/19	AW	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Fluoranthene	7600	280	ug/Kg	1	12/03/19	AW	SW8270D
Fluorene	1100	280	ug/Kg	1	12/03/19	AW	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Indeno(1,2,3-cd)pyrene	4800	280	ug/Kg	1	12/03/19	AW	SW8270D
Isophorone	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Naphthalene	550	280	ug/Kg	1	12/03/19	AW	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/03/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
Phenanthrene	7100	280	ug/Kg	1	12/03/19	AW	SW8270D
Phenol	ND	280	ug/Kg	1	12/03/19	AW	SW8270D
Pyrene	7700	280	ug/Kg	1	12/03/19	AW	SW8270D
Pyridine	ND	390	ug/Kg	1	12/03/19	AW	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	85		%	1	12/03/19	AW	30 - 130 %
% 2-Fluorobiphenyl	70		%	1	12/03/19	AW	30 - 130 %
% 2-Fluorophenol	63		%	1	12/03/19	AW	30 - 130 %
% Nitrobenzene-d5	69		%	1	12/03/19	AW	30 - 130 %
% Phenol-d5	75		%	1	12/03/19	AW	30 - 130 %
% Terphenyl-d14	58		%	1	12/03/19	AW	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

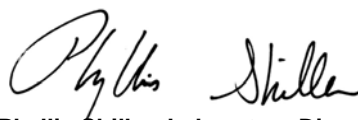
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

TCLP Non-Volatile Extraction:

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date Time

11/21/19 15:00  
11/25/19 18:10

### Laboratory Data

SDG ID: GCE67594  
Phoenix ID: CE67605

Project ID: 515 SOMERVILLE AVE, SOMERVILLE MA  
Client ID: CP-5S9

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Arsenic	2.72	0.69	mg/Kg	1	11/28/19	TH	SW6010D
Barium	20.1	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Beryllium	< 0.28	0.28	mg/Kg	1	11/28/19	TH	SW6010D
Cadmium	< 0.35	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Chromium	13.1	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Mercury	0.08	0.03	mg/Kg	2	12/03/19	RS	SW7471B
Nickel	11.0	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Lead	30.7	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	11/28/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/28/19	TH	SW6010D
Thallium	< 3.1	3.1	mg/Kg	1	11/28/19	TH	SW6010D
Vanadium	27.9	0.35	mg/Kg	1	11/28/19	TH	SW6010D
Zinc	33.0	0.7	mg/Kg	1	11/28/19	TH	SW6010D
Percent Solid	90		%		11/25/19	VT	SW846-%Solid
Conductivity - Soil Matrix	348	5	umhos/cm	1	11/25/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/25/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	11/27/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	11/27/19	BJA	SW846-Ignit
pH at 25C - Soil	7.48	1.00	pH Units	1	11/25/19 21:20	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	11/27/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	11/27/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	11/27/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/03/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/26/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/26/19	F/G/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	80		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	78		%	2	12/02/19	SC	30 - 150 %
% TCMX	75		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	77		%	2	12/02/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Other Oil	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	11/27/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	54		%	1	11/27/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitroaniline	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitroaniline	ND	580	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Aniline	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzidine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/02/19	KCA	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Carbazole	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Chrysene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Fluoranthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Fluorene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Isophorone	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachloronitrobenzene	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
Phenanthrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Pyrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Pyridine	ND	360	ug/Kg	1	12/02/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	90		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol	60		%	1	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5	76		%	1	12/02/19	KCA	30 - 130 %
% Phenol-d5	68		%	1	12/02/19	KCA	30 - 130 %
% Terphenyl-d14	59		%	1	12/02/19	KCA	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
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## QA/QC Report

December 12, 2019

### QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 507891 (mg/kg), QC Sample No: CE67045 2X (CE67594, CE67595, CE67596, CE67597)													
Mercury - Soil	BRL	0.02	<0.03	<0.03	NC	97.9	95.3	2.7	108	115	6.3	75 - 125	20
Comment:													

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 508104 (mg/kg), QC Sample No: CE67598 2X (CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)

Mercury - Soil	BRL	0.02	3.49	1.85	61.4	86.1	81.4	5.6	NC	NC	NC	75 - 125	20	r
Comment:														

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 507986 (mg/kg), QC Sample No: CE67594 (CE67594, CE67595, CE67596, CE67597, CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)

### ICP Metals - Soil

Antimony	BRL	3.3	<3.5	<3.3	NC	87.8	84.9	3.4	86.6			75 - 125	30	
Arsenic	BRL	0.67	4.65	5.20	11.2	100	99.9	0.1	90.4			75 - 125	30	
Barium	BRL	0.33	61.7	70.3	13.0	92.6	100	7.7	129			75 - 125	30	m
Beryllium	BRL	0.27	0.40	0.37	NC	101	102	1.0	100			75 - 125	30	
Cadmium	BRL	0.33	0.60	0.66	NC	80.5	88.0	8.9	91.7			75 - 125	30	
Chromium	BRL	0.33	15.1	17.6	15.3	108	106	1.9	97.4			75 - 125	30	
Lead	BRL	0.33	173	192	10.4	99.4	104	4.5	92.5			75 - 125	30	
Nickel	BRL	0.33	10.2	11.3	10.2	97.9	97.8	0.1	94.4			75 - 125	30	
Selenium	BRL	1.3	<1.4	<1.3	NC	84.5	86.4	2.2	78.3			75 - 125	30	
Silver	BRL	0.33	<0.35	<0.33	NC	107	104	2.8	101			75 - 125	30	
Thallium	BRL	3.0	<3.2	<3.0	NC	97.3	100	2.7	94.0			75 - 125	30	
Vanadium	BRL	0.33	26.7	28.7	7.20	110	108	1.8	98.6			75 - 125	30	
Zinc	BRL	0.67	153	132	14.7	95.7	94.5	1.3	91.5			75 - 125	30	

QA/QC Batch 509703 (mg/L), QC Sample No: CE83536 (CE67594, CE67595, CE67597, CE67598, CE67600, CE67601, CE67603, CE67604)

### ICP Metals - TCLP Extraction

Lead	BRL	0.10	13.3	15.8	17.2	96.8	97.8	1.0	120			75 - 125	20	
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m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.



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## QA/QC Report

December 12, 2019

### QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 508086 (mg/Kg), QC Sample No: CE67095 4.9X (CE67594, CE67595, CE67596, CE67597, CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)													
Reactivity Cyanide	BRL	0.05	<6	<5.5	NC	93.3						80 - 120	20
Reactivity Sulfide	BRL	20	<20	<20	NC	100						80 - 120	20
Comment: Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 507864 (umhos/cm), QC Sample No: CE65750 (CE67594, CE67595, CE67596, CE67597)													
Conductivity - Soil Matrix	BRL	5	1640	1650	0.60	103						75 - 125	30
Comment: Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 507870 (umhos/cm), QC Sample No: CE66233 (CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)													
Conductivity - Soil Matrix	BRL	5	692	700	1.10	104						75 - 125	30
Comment: Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 507964 (Degree F), QC Sample No: CE67474 (CE67594, CE67595, CE67596)													
Flash Point			>200	>200	NC	101						75 - 125	30
Comment: Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 507876 (PH), QC Sample No: CE67482 (CE67594, CE67595, CE67596, CE67597, CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)													
pH at 25C - Soil			7.75	7.72	0.40	101						85 - 115	20
Comment: Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 508208 (Degree F), QC Sample No: CE67764 (CE67597, CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)													
Flash Point			>200	>200	NC	101						75 - 125	30
Comment: Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													



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## QA/QC Report

December 12, 2019

### QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 507979 (mg/Kg), QC Sample No: CE65739 (CE67594, CE67595, CE67596, CE67597, CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)

#### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	73	89	19.8	68			50 - 150	30
% n-Pentacosane	66	%	73	83	12.8	69			50 - 150	30

Comment:

No MSD to report.

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 508238 (ug/Kg), QC Sample No: CE68608 2X (CE67597, CE67598, CE67599, CE67600, CE67601, CE67602, CE67603, CE67604, CE67605)

#### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	84	85	1.2	79	83	4.9	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	89	80	10.7	88	89	1.1	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	94	%	99	91	8.4	96	98	2.1	30 - 150	30
% DCBP (Surrogate Rec) (Confirm)	93	%	106	91	15.2	94	99	5.2	30 - 150	30
% TCMX (Surrogate Rec)	87	%	92	90	2.2	86	88	2.3	30 - 150	30
% TCMX (Surrogate Rec) (Confirm)	88	%	98	95	3.1	92	94	2.2	30 - 150	30

QA/QC Batch 508183 (ug/Kg), QC Sample No: CE69304 2X (CE67594, CE67595, CE67596)

#### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	83	79	4.9	70	72	2.8	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	80	78	2.5	68	69	1.5	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	85	%	90	87	3.4	78	76	2.6	30 - 150	30
% DCBP (Surrogate Rec) (Confirm)	88	%	93	89	4.4	78	75	3.9	30 - 150	30
% TCMX (Surrogate Rec)	84	%	85	83	2.4	72	69	4.3	30 - 150	30
% TCMX (Surrogate Rec) (Confirm)	82	%	89	86	3.4	75	72	4.1	30 - 150	30

## QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 508027 (ug/kg), QC Sample No: CE67599 (CE67594, CE67595, CE67596, CE67597, CE67598, CE67599, CE67600)										
<b>Semivolatiles - Soil</b>										
1,2,4,5-Tetrachlorobenzene	ND	230	57	66	14.6	62	63	1.6	40 - 140	30
1,2,4-Trichlorobenzene	ND	230	49	62	23.4	61	65	6.3	40 - 140	30
1,2-Dichlorobenzene	ND	180	52	52	0.0	56	60	6.9	40 - 140	30
1,2-Diphenylhydrazine	ND	230	55	61	10.3	82	80	2.5	40 - 140	30
1,3-Dichlorobenzene	ND	230	50	50	0.0	54	59	8.8	40 - 140	30
1,4-Dichlorobenzene	ND	230	52	52	0.0	54	58	7.1	40 - 140	30
2,4,5-Trichlorophenol	ND	230	70	78	10.8	78	80	2.5	30 - 130	30
2,4,6-Trichlorophenol	ND	130	70	79	12.1	77	77	0.0	30 - 130	30
2,4-Dichlorophenol	ND	130	62	70	12.1	75	79	5.2	30 - 130	30
2,4-Dimethylphenol	ND	230	65	75	14.3	77	82	6.3	30 - 130	30
2,4-Dinitrophenol	ND	230	73	93	24.1	53	37	35.6	30 - 130	30 r
2,4-Dinitrotoluene	ND	130	72	82	13.0	92	93	1.1	40 - 140	30
2,6-Dinitrotoluene	ND	130	66	77	15.4	85	84	1.2	40 - 140	30
2-Chloronaphthalene	ND	230	58	66	12.9	68	70	2.9	40 - 140	30
2-Chlorophenol	ND	230	49	63	25.0	71	75	5.5	30 - 130	30
2-Methylnaphthalene	ND	230	54	63	15.4	67	70	4.4	40 - 140	30
2-Methylphenol (o-cresol)	ND	230	50	57	13.1	79	83	4.9	30 - 130	30
2-Nitroaniline	ND	330	89	102	13.6	98	98	0.0	40 - 140	30
2-Nitrophenol	ND	230	59	74	22.6	71	75	5.5	30 - 130	30
3&4-Methylphenol (m&p-cresol)	ND	230	54	62	13.8	77	81	5.1	30 - 130	30
3,3'-Dichlorobenzidine	ND	130	67	79	16.4	92	97	5.3	40 - 140	30
3-Nitroaniline	ND	330	70	83	17.0	101	101	0.0	40 - 140	30
4,6-Dinitro-2-methylphenol	ND	230	83	101	19.6	80	62	25.4	30 - 130	30
4-Bromophenyl phenyl ether	ND	230	65	71	8.8	78	77	1.3	40 - 140	30
4-Chloro-3-methylphenol	ND	230	64	75	15.8	87	88	1.1	30 - 130	30
4-Chloroaniline	ND	230	47	56	17.5	80	82	2.5	40 - 140	30
4-Chlorophenyl phenyl ether	ND	230	64	71	10.4	76	77	1.3	40 - 140	30
4-Nitroaniline	ND	230	63	71	11.9	91	90	1.1	40 - 140	30
4-Nitrophenol	ND	230	67	77	13.9	92	94	2.2	30 - 130	30
Acenaphthene	ND	230	60	66	9.5	74	74	0.0	40 - 140	30
Acenaphthylene	ND	130	58	65	11.4	70	70	0.0	40 - 140	30
Acetophenone	ND	230	41	52	23.7	62	66	6.3	40 - 140	30
Aniline	ND	330	39	39	0.0	61	65	6.3	40 - 140	30 l
Anthracene	ND	230	63	69	9.1	76	78	2.6	40 - 140	30
Benz(a)anthracene	ND	230	66	71	7.3	78	81	3.8	40 - 140	30
Benzidine	ND	330	<10	<10	NC	76	79	3.9	40 - 140	30 l
Benzo(a)pyrene	ND	130	67	74	9.9	80	84	4.9	40 - 140	30
Benzo(b)fluoranthene	ND	160	63	68	7.6	76	80	5.1	40 - 140	30
Benzo(ghi)perylene	ND	230	54	65	18.5	68	74	8.5	40 - 140	30
Benzo(k)fluoranthene	ND	230	62	69	10.7	75	77	2.6	40 - 140	30
Benzoic Acid	ND	330	25	64	87.6	<10	<10	NC	30 - 130	30 l,m,r
Benzyl butyl phthalate	ND	230	69	76	9.7	86	91	5.6	40 - 140	30
Bis(2-chloroethoxy)methane	ND	230	46	53	14.1	70	74	5.6	40 - 140	30
Bis(2-chloroethyl)ether	ND	130	45	45	0.0	62	67	7.8	40 - 140	30
Bis(2-chloroisopropyl)ether	ND	230	43	43	0.0	65	70	7.4	40 - 140	30
Bis(2-ethylhexyl)phthalate	ND	230	60	65	8.0	85	89	4.6	40 - 140	30
Carbazole	ND	230	64	70	9.0	82	84	2.4	40 - 140	30
Chrysene	ND	230	63	68	7.6	77	80	3.8	40 - 140	30
Dibenz(a,h)anthracene	ND	130	61	76	21.9	78	83	6.2	40 - 140	30
Dibenzofuran	ND	230	63	70	10.5	75	76	1.3	40 - 140	30



## QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Diethyl phthalate	ND	230	64	72	11.8	80	80	0.0	40 - 140	30
Dimethylphthalate	ND	230	62	70	12.1	78	79	1.3	40 - 140	30
Di-n-butylphthalate	ND	670	66	72	8.7	81	84	3.6	40 - 140	30
Di-n-octylphthalate	ND	230	64	70	9.0	74	78	5.3	40 - 140	30
Fluoranthene	ND	230	66	71	7.3	78	80	2.5	40 - 140	30
Fluorene	ND	230	64	70	9.0	77	77	0.0	40 - 140	30
Hexachlorobenzene	ND	130	61	67	9.4	74	75	1.3	40 - 140	30
Hexachlorobutadiene	ND	230	50	66	27.6	56	60	6.9	40 - 140	30
Hexachlorocyclopentadiene	ND	230	45	53	16.3	42	44	4.7	40 - 140	30
Hexachloroethane	ND	130	50	50	0.0	54	59	8.8	40 - 140	30
Indeno(1,2,3-cd)pyrene	ND	230	60	72	18.2	80	85	6.1	40 - 140	30
Isophorone	ND	130	44	52	16.7	67	70	4.4	40 - 140	30
Naphthalene	ND	230	46	58	23.1	63	67	6.2	40 - 140	30
Nitrobenzene	ND	130	48	61	23.9	68	73	7.1	40 - 140	30
N-Nitrosodimethylamine	ND	230	38	38	0.0	59	65	9.7	40 - 140	30
N-Nitrosodi-n-propylamine	ND	130	44	52	16.7	72	76	5.4	40 - 140	30
N-Nitrosodiphenylamine	ND	130	67	74	9.9	82	81	1.2	40 - 140	30
Pentachloronitrobenzene	ND	230	77	85	9.9	75	75	0.0	40 - 140	30
Pentachlorophenol	ND	230	70	83	17.0	73	71	2.8	30 - 130	30
Phenanthrene	ND	130	62	67	7.8	74	76	2.7	40 - 140	30
Phenol	ND	230	47	55	15.7	83	87	4.7	30 - 130	30
Pyrene	ND	230	66	73	10.1	77	80	3.8	40 - 140	30
Pyridine	ND	230	26	26	0.0	41	47	13.6	40 - 140	30
% 2,4,6-Tribromophenol	52	%	69	75	8.3	76	80	5.1	30 - 130	30
% 2-Fluorobiphenyl	59	%	57	63	10.0	63	64	1.6	30 - 130	30
% 2-Fluorophenol	47	%	40	52	26.1	63	68	7.6	30 - 130	30
% Nitrobenzene-d5	55	%	49	63	25.0	65	70	7.4	30 - 130	30
% Phenol-d5	53	%	48	55	13.6	73	78	6.6	30 - 130	30
% Terphenyl-d14	72	%	60	65	8.0	70	72	2.8	30 - 130	30

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 508181 (ug/kg), QC Sample No: CE68613 (CE67601, CE67602, CE67603, CE67604, CE67605)

### Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	59	68	14.2	67	68	1.5	40 - 140	30
1,2,4-Trichlorobenzene	ND	230	58	66	12.9	69	69	0.0	40 - 140	30
1,2-Dichlorobenzene	ND	180	51	62	19.5	61	67	9.4	40 - 140	30
1,2-Diphenylhydrazine	ND	230	67	72	7.2	71	76	6.8	40 - 140	30
1,3-Dichlorobenzene	ND	230	47	56	17.5	59	59	0.0	40 - 140	30
1,4-Dichlorobenzene	ND	230	49	60	20.2	60	61	1.7	40 - 140	30
2,4,5-Trichlorophenol	ND	230	74	85	13.8	84	85	1.2	30 - 130	30
2,4,6-Trichlorophenol	ND	130	73	84	14.0	80	80	0.0	30 - 130	30
2,4-Dichlorophenol	ND	130	64	80	22.2	76	80	5.1	30 - 130	30
2,4-Dimethylphenol	ND	230	70	88	22.8	78	86	9.8	30 - 130	30
2,4-Dinitrophenol	ND	230	81	105	25.8	70	72	2.8	30 - 130	30
2,4-Dinitrotoluene	ND	130	69	80	14.8	77	81	5.1	40 - 140	30
2,6-Dinitrotoluene	ND	130	75	86	13.7	81	85	4.8	40 - 140	30
2-Chloronaphthalene	ND	230	64	72	11.8	71	72	1.4	40 - 140	30
2-Chlorophenol	ND	230	55	81	38.2	70	77	9.5	30 - 130	30
2-Methylnaphthalene	ND	230	61	70	13.7	70	73	4.2	40 - 140	30
2-Methylphenol (o-cresol)	ND	230	61	93	41.6	81	96	16.9	30 - 130	30
2-Nitroaniline	ND	330	89	100	11.6	107	117	8.9	40 - 140	30

## QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Nitrophenol	ND	230	76	86	12.3	83	87	4.7	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	59	95	46.8	78	90	14.3	30 - 130	30	r
3,3'-Dichlorobenzidine	ND	130	51	50	2.0	64	61	4.8	40 - 140	30	
3-Nitroaniline	ND	330	67	72	7.2	85	77	9.9	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	76	94	21.2	75	77	2.6	30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	66	76	14.1	75	80	6.5	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	74	84	12.7	78	85	8.6	30 - 130	30	
4-Chloroaniline	ND	230	28	42	40.0	56	48	15.4	40 - 140	30	l,r
4-Chlorophenyl phenyl ether	ND	230	68	77	12.4	75	78	3.9	40 - 140	30	
4-Nitroaniline	ND	230	79	84	6.1	81	89	9.4	40 - 140	30	
4-Nitrophenol	ND	230	88	97	9.7	94	97	3.1	30 - 130	30	
Acenaphthene	ND	230	66	74	11.4	63	70	10.5	40 - 140	30	
Acenaphthylene	ND	130	60	69	14.0	66	68	3.0	40 - 140	30	
Acetophenone	ND	230	50	76	41.3	65	74	12.9	40 - 140	30	r
Aniline	ND	330	32	45	33.8	81	45	57.1	40 - 140	30	l,r
Anthracene	ND	230	64	69	7.5	57	62	8.4	40 - 140	30	
Benz(a)anthracene	ND	230	67	72	7.2	42	89	71.8	40 - 140	30	r
Benzidine	ND	330	<10	<10	NC	<10	<10	NC	40 - 140	30	l,m
Benzo(a)pyrene	ND	130	69	73	5.6	47	94	66.7	40 - 140	30	r
Benzo(b)fluoranthene	ND	160	65	73	11.6	53	99	60.5	40 - 140	30	r
Benzo(ghi)perylene	ND	230	58	63	8.3	56	76	30.3	40 - 140	30	
Benzo(k)fluoranthene	ND	230	66	71	7.3	51	68	28.6	40 - 140	30	
Benzoic Acid	ND	330	67	93	32.5	18	29	46.8	30 - 130	30	m,r
Benzyl butyl phthalate	ND	230	66	77	15.4	77	81	5.1	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	60	71	16.8	66	73	10.1	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	45	63	33.3	115	63	58.4	40 - 140	30	r
Bis(2-chloroisopropyl)ether	ND	230	45	61	30.2	56	63	11.8	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	68	75	9.8	77	85	9.9	40 - 140	30	
Carbazole	ND	230	63	69	9.1	61	64	4.8	40 - 140	30	
Chrysene	ND	230	63	69	9.1	36	87	82.9	40 - 140	30	m,r
Dibenz(a,h)anthracene	ND	130	67	72	7.2	77	86	11.0	40 - 140	30	
Dibenzofuran	ND	230	65	72	10.2	67	70	4.4	40 - 140	30	
Diethyl phthalate	ND	230	70	75	6.9	76	79	3.9	40 - 140	30	
Dimethylphthalate	ND	230	66	75	12.8	73	76	4.0	40 - 140	30	
Di-n-butylphthalate	ND	670	69	70	1.4	71	78	9.4	40 - 140	30	
Di-n-octylphthalate	ND	230	75	79	5.2	82	87	5.9	40 - 140	30	
Fluoranthene	ND	230	62	62	0.0	NC	NC	NC	40 - 140	30	
Fluorene	ND	230	70	79	12.1	70	76	8.2	40 - 140	30	
Hexachlorobenzene	ND	130	70	72	2.8	72	75	4.1	40 - 140	30	
Hexachlorobutadiene	ND	230	56	61	8.5	68	64	6.1	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	28	15	60.5	<10	<10	NC	40 - 140	30	l,m,r
Hexachloroethane	ND	130	52	58	10.9	63	62	1.6	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	68	72	5.7	64	85	28.2	40 - 140	30	
Isophorone	ND	130	55	64	15.1	63	66	4.7	40 - 140	30	
Naphthalene	ND	230	58	66	12.9	66	67	1.5	40 - 140	30	
Nitrobenzene	ND	130	58	84	36.6	74	84	12.7	40 - 140	30	r
N-Nitrosodimethylamine	ND	230	37	43	15.0	38	44	14.6	40 - 140	30	l,m
N-Nitrosodi-n-propylamine	ND	130	57	89	43.8	75	89	17.1	40 - 140	30	r
N-Nitrosodiphenylamine	ND	130	66	73	10.1	70	75	6.9	40 - 140	30	
Pentachloronitrobenzene	ND	230	69	77	11.0	77	79	2.6	40 - 140	30	
Pentachlorophenol	ND	230	88	90	2.2	82	83	1.2	30 - 130	30	
Phenanthrene	ND	130	64	69	7.5	NC	NC	NC	40 - 140	30	
Phenol	ND	230	58	88	41.1	74	80	7.8	30 - 130	30	r

## QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Pyrene	ND	230	63	62	1.6	NC	NC	NC	40 - 140	30	
Pyridine	ND	230	<10	<10	NC	<10	<10	NC	40 - 140	30	l,m
% 2,4,6-Tribromophenol	60	%	83	86	3.6	83	90	8.1	30 - 130	30	
% 2-Fluorobiphenyl	55	%	57	66	14.6	65	65	0.0	30 - 130	30	
% 2-Fluorophenol	47	%	47	69	37.9	57	63	10.0	30 - 130	30	r
% Nitrobenzene-d5	58	%	56	83	38.8	73	80	9.2	30 - 130	30	r
% Phenol-d5	53	%	54	84	43.5	68	75	9.8	30 - 130	30	r
% Terphenyl-d14	58	%	53	54	1.9	52	54	3.8	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 508492 (ug/kg), QC Sample No: CE68910 (CE67594, CE67595, CE67596)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	110	113	2.7	101	100	1.0	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	101	99	2.0	98	95	3.1	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	110	112	1.8	123	124	0.8	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	105	103	1.9	95	95	0.0	70 - 130	30	
1,1-Dichloroethane	ND	5.0	102	102	0.0	102	102	0.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	102	104	1.9	104	98	5.9	70 - 130	30	
1,1-Dichloropropene	ND	5.0	103	101	2.0	101	97	4.0	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	115	120	4.3	53	52	1.9	70 - 130	30	m
1,2,3-Trichloropropane	ND	5.0	102	106	3.8	118	116	1.7	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	119	121	1.7	60	58	3.4	70 - 130	30	m
1,2,4-Trimethylbenzene	ND	1.0	104	107	2.8	106	105	0.9	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	101	109	7.6	103	105	1.9	70 - 130	30	
1,2-Dibromoethane	ND	5.0	105	106	0.9	98	96	2.1	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	108	111	2.7	89	88	1.1	70 - 130	30	
1,2-Dichloroethane	ND	5.0	103	102	1.0	89	89	0.0	70 - 130	30	
1,2-Dichloropropane	ND	5.0	106	104	1.9	105	103	1.9	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	107	110	2.8	115	114	0.9	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	110	112	1.8	93	92	1.1	70 - 130	30	
1,3-Dichloropropane	ND	5.0	105	107	1.9	102	102	0.0	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	110	112	1.8	91	90	1.1	70 - 130	30	
1,4-dioxane	ND	100	101	90	11.5	100	90	10.5	40 - 160	30	
2,2-Dichloropropane	ND	5.0	105	105	0.0	97	94	3.1	70 - 130	30	
2-Chlorotoluene	ND	5.0	108	112	3.6	116	115	0.9	70 - 130	30	
2-Hexanone	ND	25	86	89	3.4	74	74	0.0	40 - 160	30	
2-Isopropyltoluene	ND	5.0	108	111	2.7	110	108	1.8	70 - 130	30	
4-Chlorotoluene	ND	5.0	111	115	3.5	109	106	2.8	70 - 130	30	
4-Methyl-2-pentanone	ND	25	95	95	0.0	85	86	1.2	40 - 160	30	
Acetone	ND	10	77	75	2.6	25	31	21.4	40 - 160	30	m
Acrylonitrile	ND	5.0	97	99	2.0	84	84	0.0	70 - 130	30	
Benzene	ND	1.0	105	103	1.9	104	101	2.9	70 - 130	30	
Bromobenzene	ND	5.0	107	108	0.9	107	107	0.0	70 - 130	30	
Bromochloromethane	ND	5.0	104	105	1.0	97	97	0.0	70 - 130	30	
Bromodichloromethane	ND	5.0	110	108	1.8	96	95	1.0	70 - 130	30	
Bromoform	ND	5.0	111	113	1.8	83	84	1.2	70 - 130	30	
Bromomethane	ND	5.0	105	110	4.7	105	97	7.9	40 - 160	30	
Carbon Disulfide	ND	5.0	101	100	1.0	86	84	2.4	70 - 130	30	
Carbon tetrachloride	ND	5.0	104	104	0.0	94	94	0.0	70 - 130	30	
Chlorobenzene	ND	5.0	108	109	0.9	99	94	5.2	70 - 130	30	
Chloroethane	ND	5.0	94	93	1.1	94	92	2.2	70 - 130	30	

## QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroform	ND	5.0	101	100	1.0	97	96	1.0	70 - 130	30
Chloromethane	ND	5.0	98	96	2.1	95	93	2.1	40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	103	102	1.0	99	97	2.0	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	111	109	1.8	89	86	3.4	70 - 130	30
Dibromochloromethane	ND	3.0	112	116	3.5	98	98	0.0	70 - 130	30
Dibromomethane	ND	5.0	108	105	2.8	94	93	1.1	70 - 130	30
Dichlorodifluoromethane	ND	5.0	107	106	0.9	100	98	2.0	40 - 160	30
Diethyl ether	ND	5.0	94	91	3.2	89	88	1.1	70 - 130	30
Di-isopropyl ether	ND	5.0	101	100	1.0	98	99	1.0	70 - 130	30
Ethyl tert-butyl ether	ND	5.0	102	100	2.0	96	97	1.0	70 - 130	30
Ethylbenzene	ND	1.0	106	107	0.9	105	101	3.9	70 - 130	30
Hexachlorobutadiene	ND	5.0	113	114	0.9	77	74	4.0	70 - 130	30
Isopropylbenzene	ND	1.0	105	109	3.7	126	124	1.6	70 - 130	30
m&p-Xylene	ND	2.0	106	108	1.9	102	99	3.0	70 - 130	30
Methyl ethyl ketone	ND	5.0	86	86	0.0	72	74	2.7	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	93	92	1.1	85	87	2.3	70 - 130	30
Methylene chloride	ND	5.0	85	84	1.2	82	79	3.7	70 - 130	30
Naphthalene	ND	5.0	107	112	4.6	64	61	4.8	70 - 130	30 m
n-Butylbenzene	ND	1.0	114	117	2.6	103	100	3.0	70 - 130	30
n-Propylbenzene	ND	1.0	108	111	2.7	121	119	1.7	70 - 130	30
o-Xylene	ND	2.0	108	108	0.0	102	99	3.0	70 - 130	30
p-Isopropyltoluene	ND	1.0	111	113	1.8	110	107	2.8	70 - 130	30
sec-Butylbenzene	ND	1.0	114	116	1.7	119	118	0.8	70 - 130	30
Styrene	ND	5.0	111	112	0.9	91	89	2.2	70 - 130	30
tert-amyl methyl ether	ND	5.0	103	100	3.0	96	95	1.0	70 - 130	30
tert-Butylbenzene	ND	1.0	106	109	2.8	117	116	0.9	70 - 130	30
Tetrachloroethene	ND	5.0	109	107	1.9	99	95	4.1	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	96	96	0.0	96	95	1.0	70 - 130	30
Toluene	ND	1.0	103	101	2.0	99	96	3.1	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	102	100	2.0	94	93	1.1	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	110	110	0.0	81	79	2.5	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	112	115	2.6	86	87	1.2	70 - 130	30
Trichloroethene	ND	5.0	104	102	1.9	99	94	5.2	70 - 130	30
Trichlorofluoromethane	ND	5.0	93	91	2.2	87	84	3.5	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	100	99	1.0	100	98	2.0	70 - 130	30
Vinyl chloride	ND	5.0	89	88	1.1	87	84	3.5	70 - 130	30
% 1,2-dichlorobenzene-d4	96	%	100	99	1.0	98	98	0.0	70 - 130	30
% Bromofluorobenzene	98	%	101	100	1.0	92	92	0.0	70 - 130	30
% Dibromofluoromethane	95	%	102	100	2.0	97	100	3.0	70 - 130	30
% Toluene-d8	99	%	102	100	2.0	99	99	0.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.


## QA/QC Data

SDG I.D.: GCE67594

Parameter	Blank		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
		Blk RL								

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference  
LCS - Laboratory Control Sample  
LCSD - Laboratory Control Sample Duplicate  
MS - Matrix Spike  
MS Dup - Matrix Spike Duplicate  
NC - No Criteria  
Intf - Interference



Phyllis Shiller, Laboratory Director  
December 12, 2019

Thursday, December 12, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

### GCE67594 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE67594	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2900	260	2000	2000	ug/Kg
CE67594	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2900	260	2000	2000	ug/Kg
CE67594	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	1.11	0.10	0.01	0.01	mg/L
CE67594	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	1.11	0.10	0.015	0.015	mg/L
CE67595	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2700	260	2000	2000	ug/Kg
CE67595	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2700	260	2000	2000	ug/Kg
CE67595	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.76	0.10	0.01	0.01	mg/L
CE67595	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.76	0.10	0.015	0.015	mg/L
CE67597	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	32000	2800	2000	2000	ug/Kg
CE67597	\$8270-SMR	Phenanthrene	MA / CMR 310.40.1600 / S1 (mg/kg)	23000	2800	10000	10000	ug/Kg
CE67597	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	18000	2800	7000	7000	ug/Kg
CE67597	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	4900	280	700	700	ug/Kg
CE67597	\$8270-SMR	Benzo(b)fluoranthene	MA / CMR 310.40.1600 / S1 (mg/kg)	26000	2800	7000	7000	ug/Kg
CE67597	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	33000	2800	7000	7000	ug/Kg
CE67597	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	26000	2800	7000	7000	ug/Kg
CE67597	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	4900	280	700	700	ug/Kg
CE67597	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	33000	2800	7000	7000	ug/Kg
CE67597	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	18000	2800	7000	7000	ug/Kg
CE67597	\$8270-SMR	Phenanthrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	23000	2800	10000	10000	ug/Kg
CE67597	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	32000	2800	2000	2000	ug/Kg
CE67597	\$PCB_SMR	PCB-1242	MA / CMR 310.40.1600 / S1 (mg/kg)	1900	390	1000	1000	ug/Kg
CE67597	\$PCB_SMR	PCB-1242	MA / Requested PCB RL /	1900	390	1000	1000	ug/Kg
CE67597	\$PCB_SMR	PCB-1242	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1900	390	1000	1000	ug/Kg
CE67597	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	399	0.40	200	200	mg/Kg
CE67597	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	399	0.40	200	200	mg/Kg
CE67597	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.72	0.10	0.01	0.01	mg/L
CE67597	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.72	0.10	0.015	0.015	mg/L
CE67598	\$8270-SMR	Acenaphthylene	MA / CMR 310.40.1600 / S1 (mg/kg)	1100	320	1000	1000	ug/Kg
CE67598	\$8270-SMR	Benzo(b)fluoranthene	MA / CMR 310.40.1600 / S1 (mg/kg)	44000	3200	7000	7000	ug/Kg
CE67598	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	51000	3200	7000	7000	ug/Kg
CE67598	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	8800	320	700	700	ug/Kg
CE67598	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	31000	3200	7000	7000	ug/Kg
CE67598	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	52000	3200	2000	2000	ug/Kg
CE67598	\$8270-SMR	Acenaphthene	MA / CMR 310.40.1600 / S1 (mg/kg)	5900	320	4000	4000	ug/Kg
CE67598	\$8270-SMR	Phenanthrene	MA / CMR 310.40.1600 / S1 (mg/kg)	56000	3200	10000	10000	ug/Kg
CE67598	\$8270-SMR	2-Methylnaphthalene	MA / CMR 310.40.1600 / S1 (mg/kg)	730	320	700	700	ug/Kg
CE67598	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	8800	320	700	700	ug/Kg
CE67598	\$8270-SMR	Phenanthrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	56000	3200	10000	10000	ug/Kg
CE67598	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	31000	3200	7000	7000	ug/Kg
CE67598	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	44000	3200	7000	7000	ug/Kg

Thursday, December 12, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

GCE67594 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE67598	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	51000	3200	7000	7000	ug/Kg
CE67598	\$8270-SMR	Acenaphthylene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1100	320	1000	1000	ug/Kg
CE67598	\$8270-SMR	Acenaphthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	5900	320	4000	4000	ug/Kg
CE67598	\$8270-SMR	2-Methylnaphthalene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	730	320	700	700	ug/Kg
CE67598	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	52000	3200	2000	2000	ug/Kg
CE67598	STPH_SMR	Unidentified	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1200	340	1000	1000	mg/kg
CE67598	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	3520	4.5	200	200	mg/Kg
CE67598	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	3520	4.5	200	200	mg/Kg
CE67598	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	3.13	0.10	0.01	0.01	mg/L
CE67598	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	3.13	0.10	0.015	0.015	mg/L
CE67600	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	7000	260	2000	2000	ug/Kg
CE67600	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	800	260	700	700	ug/Kg
CE67600	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	7000	260	2000	2000	ug/Kg
CE67600	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	800	260	700	700	ug/Kg
CE67600	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	515	0.33	200	200	mg/Kg
CE67600	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	515	0.33	200	200	mg/Kg
CE67600	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.92	0.10	0.01	0.01	mg/L
CE67600	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.92	0.10	0.015	0.015	mg/L
CE67601	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	4000	270	700	700	ug/Kg
CE67601	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	34000	2700	7000	7000	ug/Kg
CE67601	\$8270-SMR	Phenanthrene	MA / CMR 310.40.1600 / S1 (mg/kg)	48000	2700	10000	10000	ug/Kg
CE67601	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	32000	2700	2000	2000	ug/Kg
CE67601	\$8270-SMR	Benzo(b)fluoranthene	MA / CMR 310.40.1600 / S1 (mg/kg)	26000	2700	7000	7000	ug/Kg
CE67601	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	20000	2700	7000	7000	ug/Kg
CE67601	\$8270-SMR	2-Methylnaphthalene	MA / CMR 310.40.1600 / S1 (mg/kg)	750	270	700	700	ug/Kg
CE67601	\$8270-SMR	Phenanthrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	48000	2700	10000	10000	ug/Kg
CE67601	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	20000	2700	7000	7000	ug/Kg
CE67601	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	26000	2700	7000	7000	ug/Kg
CE67601	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	32000	2700	2000	2000	ug/Kg
CE67601	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	34000	2700	7000	7000	ug/Kg
CE67601	\$8270-SMR	2-Methylnaphthalene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	750	270	700	700	ug/Kg
CE67601	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	4000	270	700	700	ug/Kg
CE67601	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	206	0.37	200	200	mg/Kg
CE67601	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	206	0.37	200	200	mg/Kg
CE67601	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.40	0.10	0.01	0.01	mg/L
CE67601	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	2.40	0.10	0.015	0.015	mg/L
CE67602	\$PCB_SMR	PCB-1254	MA / CMR 310.40.1600 / S1 (mg/kg)	1300	350	1000	1000	ug/Kg
CE67602	\$PCB_SMR	PCB-1254	MA / Requested PCB RL /	1300	350	1000	1000	ug/Kg
CE67602	\$PCB_SMR	PCB-1254	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1300	350	1000	1000	ug/Kg

Thursday, December 12, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

### GCE67594 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE67603	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	940	260	700	700	ug/Kg
CE67603	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	6600	260	2000	2000	ug/Kg
CE67603	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	6600	260	2000	2000	ug/Kg
CE67603	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	940	260	700	700	ug/Kg
CE67603	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	2.15	0.10	0.01	0.01	mg/L
CE67603	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	2.15	0.10	0.015	0.015	mg/L
CE67604	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	7700	280	7000	7000	ug/Kg
CE67604	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	7800	280	2000	2000	ug/Kg
CE67604	\$8270-SMR	Benzo(b)fluoranthene	MA / CMR 310.40.1600 / S1 (mg/kg)	7200	280	7000	7000	ug/Kg
CE67604	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	7700	280	7000	7000	ug/Kg
CE67604	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	7800	280	2000	2000	ug/Kg
CE67604	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	7200	280	7000	7000	ug/Kg
CE67604	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	558	0.35	200	200	mg/Kg
CE67604	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	558	0.35	200	200	mg/Kg
CE67604	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.80	0.10	0.01	0.01	mg/L
CE67604	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.80	0.10	0.015	0.015	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.





**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

December 12, 2019

SDG I.D.: GCE67594

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

### **SVOA Narration**

#### **CHEM19 12/02/19-1:** CE67603

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.058 (0.1), Hexachlorobenzene 0.087 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.079 (0.1), Hexachlorobenzene 0.092 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

#### **CHEM29 11/27/19-1:** CE67594, CE67595, CE67596, CE67597, CE67598, CE67599, CE67600

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.061 (0.1), Hexachlorobenzene 0.085 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.066 (0.1), Hexachlorobenzene 0.086 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

#### **CHEM29 12/02/19-1:** CE67604

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.061 (0.1), Hexachlorobenzene 0.085 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.067 (0.1), Hexachlorobenzene 0.089 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### **VOA Narration**

#### **CHEM18 11/27/19-2:** CE67594, CE67595, CE67596



**Environmental Laboratories, Inc.**  
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## Analysis Comments

December 12, 2019

SDG I.D.: GCE67594

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The following Initial Calibration compounds did not meet RSD% criteria: Bromomethane 28% (20%), Methylene chloride 25% (20%)  
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.



6CE67594

**Tara Banning**

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**From:** mberger@ABCSOILS.COM  
**Sent:** Tuesday, December 10, 2019 8:38 PM  
**To:** Tara Banning  
**Cc:** Sarah Bell  
**Subject:** TCLP Rush request  
**Attachments:** Nov 2019 MB Working Copy GCE68606 Excel 515 SOMERVILLE AVE SOMERVILLE MA-1.xls; Nov 2019 MB Working Copy GCE67594 Excel 515 SOMERVILLE AVE SOMERVILLE MA-1.xls

Regarding the attached two reports, we are requesting 24 hour turnaround for TCLP lead testing on the following samples; thank you!

Stockpile East

Stockpile

West

CP-5E3

CP-5E6

CP-5N3

CP-5N6

CP-5S6

CP 5W3

CP-5W6

CP-5S3

CP-19 0-3

CP-9 0-3 FT

Sincerely,

Marcia

Marcia J. Berger, P.E., L.S.P.

President

ABC SOILS, INC./CLEAN PROPERTIES, INC.

111 Boston Post Road, Suite 211

Sudbury, MA 01776

Tel: (617)848-1200 direct // (800)893-1222

e-mail: [mberger@abcsoils.com](mailto:mberger@abcsoils.com)



Thursday, December 12, 2019

Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
SDG ID: GCE68606  
Sample ID#s: CE68606 - CE68613

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller  
Laboratory Director

**NELAC - #NY11301**  
**CT Lab Registration #PH-0618**  
**MA Lab Registration #M-CT007**  
**ME Lab Registration #CT-007**  
**NH Lab Registration #213693-A,B**

**NJ Lab Registration #CT-003**  
**NY Lab Registration #11301**  
**PA Lab Registration #68-03530**  
**RI Lab Registration #63**  
**UT Lab Registration #CT00007**  
**VT Lab Registration #VT11301**



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## SDG Comments

December 12, 2019

SDG I.D.: GCE68606

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Version 2: Per client request TCLP Lead was added on.



Environmental Laboratories, Inc.  
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Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

December 12, 2019

SDG I.D.: GCE68606

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA

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Client Id	Lab Id	Matrix
CP-16	CE68606	SOIL
CP-16 0-1 FT	CE68607	SOIL
CP-18 2-3 FT	CE68608	SOIL
CP-19 0-3 FT	CE68609	SOIL
CP-20 3.5-6.5 FT	CE68610	SOIL
CP-20 7.5-8 FT	CE68611	SOIL
STOCKPILE W	CE68612	SOIL
STOCKPILE E	CE68613	SOIL





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date Time

11/22/19 10:00  
11/26/19 18:25

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68606

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: CP-16

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	3.36	0.67	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	16.6	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	0.36	0.27	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	0.38	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	11.6	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/04/19	RS	SW7471B
Nickel	9.06	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	19.2	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	11/30/19	TH	SW6010D
Thallium	< 3.0	3.0	mg/Kg	1	11/30/19	CPP	SW6010D
Vanadium	19.5	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	35.5	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	92		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	45	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	7.27	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	70	ug/Kg	2	12/02/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	70		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	66		%	2	12/02/19	SC	30 - 150 %
% TCMX	69		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	69		%	2	12/02/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Fuel Oil #4	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Fuel Oil #6	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Kerosene	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Motor Oil	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Other Oil	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Unidentified	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	85		%	1	12/02/19	JRB	50 - 150 %
<b><u>Volatiles</u></b>							
1,1,1,2-Tetrachloroethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloroethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloroethene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloropropene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dibromoethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichloroethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichloropropane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,3-Dichloropropane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
2,2-Dichloropropane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
2-Hexanone	ND	17	ug/Kg	1	11/30/19	JLI	SW8260C
2-Isopropyltoluene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
4-Chlorotoluene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	17	ug/Kg	1	11/30/19	JLI	SW8260C
Acetone	ND	170	ug/Kg	1	11/30/19	JLI	SW8260C
Acrylonitrile	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Benzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Bromobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Bromochloromethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Bromodichloromethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Bromoform	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Bromomethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Carbon Disulfide	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Carbon tetrachloride	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Chlorobenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Chloroethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Chloroform	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Chloromethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Dibromochloromethane	ND	2.0	ug/Kg	1	11/30/19	JLI	SW8260C
Dibromomethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Dichlorodifluoromethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Ethylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Hexachlorobutadiene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Isopropylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
m&p-Xylene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	20	ug/Kg	1	11/30/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	6.7	ug/Kg	1	11/30/19	JLI	SW8260C
Methylene chloride	ND	6.7	ug/Kg	1	11/30/19	JLI	SW8260C
Naphthalene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
n-Butylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
n-Propylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
o-Xylene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
p-Isopropyltoluene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
sec-Butylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Styrene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
tert-Butylbenzene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Tetrachloroethene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	6.7	ug/Kg	1	11/30/19	JLI	SW8260C
Toluene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Total Xylenes	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	6.7	ug/Kg	1	11/30/19	JLI	SW8260C
Trichloroethene	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Trichlorofluoromethane	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	6.7	ug/Kg	1	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	99		%	1	11/30/19	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	11/30/19	JLI	70 - 130 %
% Dibromofluoromethane	105		%	1	11/30/19	JLI	70 - 130 %
% Toluene-d8	100		%	1	11/30/19	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	67	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Diethyl ether	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	3.4	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
2-Nitroaniline	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
3-Nitroaniline	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	12/06/19	WB	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Aniline	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benidine	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Benzoic acid	ND	710	ug/Kg	1	12/06/19	WB	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Carbazole	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Chrysene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Fluoranthene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Isophorone	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
N-Nitrosodimethylamine	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Pentachloronitrobenzene	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
Phenanthrene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Phenol	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Pyrene	ND	250	ug/Kg	1	12/06/19	WB	SW8270D
Pyridine	ND	360	ug/Kg	1	12/06/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	96		%	1	12/06/19	WB	30 - 130 %
% 2-Fluorobiphenyl	61		%	1	12/06/19	WB	30 - 130 %
% 2-Fluorophenol	60		%	1	12/06/19	WB	30 - 130 %
% Nitrobenzene-d5	72		%	1	12/06/19	WB	30 - 130 %
% Phenol-d5	72		%	1	12/06/19	WB	30 - 130 %
% Terphenyl-d14	66		%	1	12/06/19	WB	30 - 130 %
Field Extraction	Completed				11/22/19		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date Time

11/22/19 10:00  
11/26/19 18:25

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68607

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: CP-16 0-1 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	5.24	0.67	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	54.7	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	0.54	0.27	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	0.66	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	18.3	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/04/19	RS	SW7471B
Nickel	11.7	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	28.6	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	11/30/19	TH	SW6010D
Thallium	< 3.0	3.0	mg/Kg	1	11/30/19	CPP	SW6010D
Vanadium	38.1	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	76.7	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	94		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	174	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	7.85	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	RR/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1221	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1232	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1242	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1248	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1254	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1260	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1262	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1268	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	80		%	2	12/03/19	SC	30 - 150 %
% DCBP (Confirmation)	76		%	2	12/03/19	SC	30 - 150 %
% TCMX	73		%	2	12/03/19	SC	30 - 150 %
% TCMX (Confirmation)	72		%	2	12/03/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Fuel Oil #4	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Fuel Oil #6	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Kerosene	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Motor Oil	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Other Oil	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
Unidentified	ND	53	mg/kg	1	12/02/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	53		%	1	12/02/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/03/19	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
4-Nitroaniline	ND	560	ug/Kg	1	12/03/19	WB	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Aniline	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benzidine	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Benzoic acid	ND	700	ug/Kg	1	12/03/19	WB	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Carbazole	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Chrysene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Fluoranthene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Isophorone	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
Phenanthrene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Pyrene	ND	250	ug/Kg	1	12/03/19	WB	SW8270D
Pyridine	ND	350	ug/Kg	1	12/03/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	101		%	1	12/03/19	WB	30 - 130 %
% 2-Fluorobiphenyl	69		%	1	12/03/19	WB	30 - 130 %
% 2-Fluorophenol	40		%	1	12/03/19	WB	30 - 130 %
% Nitrobenzene-d5	50		%	1	12/03/19	WB	30 - 130 %
% Phenol-d5	60		%	1	12/03/19	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/03/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.


The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date Time

11/22/19 10:00  
11/26/19 18:25

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68608

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: CP-18 2-3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	2.58	0.72	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	11.0	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	0.32	0.29	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	< 0.36	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	10.4	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/04/19	RS	SW7471B
Nickel	7.38	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	3.13	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/30/19	TH	SW6010D
Thallium	< 3.3	3.3	mg/Kg	1	11/30/19	CPP	SW6010D
Vanadium	18.6	0.36	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	17.0	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	92		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	98	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	7.88	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/ALE	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	RR/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1221	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1232	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1242	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1248	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1254	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1260	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1262	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
PCB-1268	ND	70	ug/Kg	2	12/03/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	84		%	2	12/03/19	SC	30 - 150 %
% DCBP (Confirmation)	80		%	2	12/03/19	SC	30 - 150 %
% TCMX	74		%	2	12/03/19	SC	30 - 150 %
% TCMX (Confirmation)	72		%	2	12/03/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
Other Oil	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	12/02/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	75		%	1	12/02/19	JRB	50 - 150 %
<b><u>Volatiles</u></b>							
1,1,1,2-Tetrachloroethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.3	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloroethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloroethene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloropropene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dibromoethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichloroethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichloropropane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,3-Dichloropropane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
2,2-Dichloropropane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Chlorotoluene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
2-Hexanone	ND	20	ug/Kg	1	11/30/19	JLI	SW8260C
2-Isopropyltoluene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
4-Chlorotoluene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	20	ug/Kg	1	11/30/19	JLI	SW8260C
Acetone	ND	200	ug/Kg	1	11/30/19	JLI	SW8260C
Acrylonitrile	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Benzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Bromobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Bromochloromethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Bromodichloromethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Bromoform	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Bromomethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Carbon Disulfide	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Carbon tetrachloride	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Chlorobenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Chloroethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Chloroform	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Chloromethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Dibromochloromethane	ND	2.3	ug/Kg	1	11/30/19	JLI	SW8260C
Dibromomethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Dichlorodifluoromethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Ethylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Hexachlorobutadiene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Isopropylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
m&p-Xylene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	23	ug/Kg	1	11/30/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	7.8	ug/Kg	1	11/30/19	JLI	SW8260C
Methylene chloride	ND	7.8	ug/Kg	1	11/30/19	JLI	SW8260C
Naphthalene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
n-Butylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
n-Propylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
o-Xylene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
p-Isopropyltoluene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
sec-Butylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Styrene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
tert-Butylbenzene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Tetrachloroethene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	7.8	ug/Kg	1	11/30/19	JLI	SW8260C
Toluene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Total Xylenes	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	7.8	ug/Kg	1	11/30/19	JLI	SW8260C
Trichloroethene	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Trichlorofluoromethane	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.8	ug/Kg	1	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Vinyl chloride	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	99		%	1	11/30/19	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	11/30/19	JLI	70 - 130 %
% Dibromofluoromethane	103		%	1	11/30/19	JLI	70 - 130 %
% Toluene-d8	100		%	1	11/30/19	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	78	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Diethyl ether	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	3.9	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
3-Nitroaniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitroaniline	ND	560	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Aniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benidine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Benzoic acid	ND	710	ug/Kg	1	12/02/19	KCA	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Carbazole	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Chrysene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Fluoranthene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Fluorene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Isophorone	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Phenanthrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Phenol	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Pyrene	ND	250	ug/Kg	1	12/02/19	KCA	SW8270D
Pyridine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	65		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	50		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol	46		%	1	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5	58		%	1	12/02/19	KCA	30 - 130 %
% Phenol-d5	56		%	1	12/02/19	KCA	30 - 130 %
% Terphenyl-d14	55		%	1	12/02/19	KCA	30 - 130 %
Field Extraction	Completed				11/22/19		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

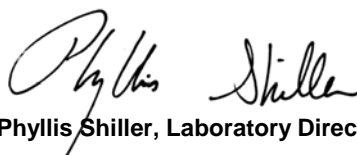
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
11/22/19	10:00
11/26/19	18:25

### Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68609

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: CP-19 0-3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.32	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	4.04	0.65	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	55.1	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	0.49	0.26	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	1.14	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	15.6	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	0.33	0.03	mg/Kg	2	12/04/19	RS	SW7471B
Nickel	11.7	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	135	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.2	3.2	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	11/30/19	TH	SW6010D
TCLP Lead	0.10	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 2.9	2.9	mg/Kg	1	11/30/19	CPP	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	23.6	0.32	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	114	0.6	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	92		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	247	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	6.63	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	RR/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	72	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	72	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	79		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	76		%	2	12/02/19	SC	30 - 150 %
% TCMX	74		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	75		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	53	mg/kg	1	12/03/19	JRB	SW8015D DRO
Fuel Oil #4	ND	53	mg/kg	1	12/03/19	JRB	SW8015D DRO
Fuel Oil #6	ND	53	mg/kg	1	12/03/19	JRB	SW8015D DRO
Kerosene	ND	53	mg/kg	1	12/03/19	JRB	SW8015D DRO
Motor Oil	ND	53	mg/kg	1	12/03/19	JRB	SW8015D DRO
Other Oil	**	53	mg/kg	1	12/03/19	JRB	SW8015D DRO
Unidentified	60	53	mg/kg	1	12/03/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	68		%	1	12/03/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
3-Nitroaniline	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	12/03/19	KCA	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Aniline	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
Anthracene	810	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benz(a)anthracene	2900	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benzidine	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(a)pyrene	2800	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(b)fluoranthene	2500	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(ghi)perylene	1700	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(k)fluoranthene	2100	250	ug/Kg	1	12/03/19	KCA	SW8270D
Benzoic acid	ND	710	ug/Kg	1	12/03/19	KCA	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Carbazole	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
Chrysene	2800	250	ug/Kg	1	12/03/19	KCA	SW8270D
Dibenz(a,h)anthracene	440	250	ug/Kg	1	12/03/19	KCA	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Fluoranthene	5300	250	ug/Kg	1	12/03/19	KCA	SW8270D
Fluorene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	1900	250	ug/Kg	1	12/03/19	KCA	SW8270D
Isophorone	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
Phenanthrene	2800	250	ug/Kg	1	12/03/19	KCA	SW8270D
Phenol	ND	250	ug/Kg	1	12/03/19	KCA	SW8270D
Pyrene	4400	250	ug/Kg	1	12/03/19	KCA	SW8270D
Pyridine	ND	350	ug/Kg	1	12/03/19	KCA	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	67		%	1	12/03/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	42		%	1	12/03/19	KCA	30 - 130 %
% 2-Fluorophenol	34		%	1	12/03/19	KCA	30 - 130 %
% Nitrobenzene-d5	43		%	1	12/03/19	KCA	30 - 130 %
% Phenol-d5	41		%	1	12/03/19	KCA	30 - 130 %
% Terphenyl-d14	35		%	1	12/03/19	KCA	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

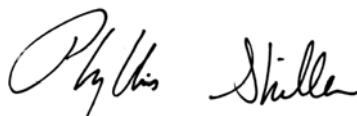
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date Time

11/22/19 10:00  
11/26/19 18:25

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68610

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: CP-20 3.5-6.5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	2.81	0.67	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	13.0	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	< 0.27	0.27	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	< 0.34	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	10.0	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/04/19	RS	SW7471B
Nickel	8.49	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	3.64	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	11/30/19	TH	SW6010D
Thallium	< 3.0	3.0	mg/Kg	1	11/30/19	CPP	SW6010D
Vanadium	17.3	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	18.2	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	95		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	69	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	7.15	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	RR/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				11/27/19	RM	MADEP VPH04

### **Polychlorinated Biphenyls**

PCB-1016	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	68	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	68	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	79		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	79		%	2	12/02/19	SC	30 - 150 %
% TCMX	75		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	73		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO
Fuel Oil #4	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO
Fuel Oil #6	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO
Kerosene	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO
Motor Oil	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO
Other Oil	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO
Unidentified	ND	52	mg/kg	1	12/03/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	74		%	1	12/03/19	JRB	50 - 150 %
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### **Volatiles**

1,1,1,2-Tetrachloroethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.5	ug/Kg	1	11/30/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloroethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloroethene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,1-Dichloropropene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dibromoethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichloroethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,2-Dichloropropane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,3-Dichloropropane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
2-Chlorotoluene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
2-Hexanone	ND	21	ug/Kg	1	11/30/19	JLI	SW8260C
2-Isopropyltoluene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
4-Chlorotoluene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	21	ug/Kg	1	11/30/19	JLI	SW8260C
Acetone	ND	210	ug/Kg	1	11/30/19	JLI	SW8260C
Acrylonitrile	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Benzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Bromobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Bromochloromethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Bromodichloromethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Bromoform	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Bromomethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Carbon Disulfide	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Carbon tetrachloride	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Chlorobenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Chloroethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Chloroform	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Chloromethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Dibromochloromethane	ND	2.5	ug/Kg	1	11/30/19	JLI	SW8260C
Dibromomethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Dichlorodifluoromethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Ethylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Hexachlorobutadiene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Isopropylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
m&p-Xylene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	25	ug/Kg	1	11/30/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	8.4	ug/Kg	1	11/30/19	JLI	SW8260C
Methylene chloride	ND	8.4	ug/Kg	1	11/30/19	JLI	SW8260C
Naphthalene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
n-Butylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
n-Propylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
o-Xylene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
p-Isopropyltoluene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
sec-Butylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Styrene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
tert-Butylbenzene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Tetrachloroethene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	8.4	ug/Kg	1	11/30/19	JLI	SW8260C
Toluene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Total Xylenes	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	8.4	ug/Kg	1	11/30/19	JLI	SW8260C
Trichloroethene	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
Trichlorofluoromethane	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	8.4	ug/Kg	1	11/30/19	JLI	SW8260C
Vinyl chloride	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	102		%	1	11/30/19	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	11/30/19	JLI	70 - 130 %
% Dibromofluoromethane	97		%	1	11/30/19	JLI	70 - 130 %
% Toluene-d8	100		%	1	11/30/19	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	84	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Diethyl ether	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.2	ug/Kg	1	11/30/19	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dichlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dimethylphenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chloronaphthalene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylnaphthalene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitrophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
3-Nitroaniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloroaniline	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitroaniline	ND	550	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitrophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthylene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Acetophenone	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Aniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Anthracene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzidine	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(a)pyrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzoic acid	ND	690	ug/Kg	1	12/02/19	KCA	SW8270D
Benzyl butyl phthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Carbazole	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Chrysene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenzofuran	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Diethyl phthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Dimethylphthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-octylphthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Fluoranthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Fluorene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobutadiene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachloroethane	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Isophorone	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Naphthalene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Nitrobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Phenanthrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Phenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Pyrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Pyridine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	61		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	49		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol	46		%	1	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5	58		%	1	12/02/19	KCA	30 - 130 %
% Phenol-d5	54		%	1	12/02/19	KCA	30 - 130 %
% Terphenyl-d14	50		%	1	12/02/19	KCA	30 - 130 %
Field Extraction	Completed				11/22/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	3.6	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	ND	3.6	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	3.6	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	3.6	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	3.6	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
Benzene	ND	0.018	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.036	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
MTBE	ND	0.036	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
Naphthalene	ND	0.18	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
Toluene	ND	0.036	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.036	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
o-Xylene	0.054	0.036	mg/Kg	50	11/27/19	RM	MA VPH 5/2004
<b><u>QA/QC Surrogates</u></b>							
% 2,5-Dibromotoluene (FID)	90		%	50	11/27/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	94		%	50	11/27/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date Time

11/22/19 10:00  
11/26/19 18:25

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68611

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: CP-20 7.5-8 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	3.26	0.71	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	20.1	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	< 0.28	0.28	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	< 0.35	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	10.6	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/04/19	RS	SW7471B
Nickel	8.70	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	3.91	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/30/19	TH	SW6010D
Thallium	< 3.2	3.2	mg/Kg	1	11/30/19	CPP	SW6010D
Vanadium	19.7	0.35	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	19.0	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	94		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	52	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	135	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Failed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	6.73	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	RR/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				12/03/19	VV/ALE	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				11/27/19	RM	MADEP VPH04

### **Polychlorinated Biphenyls**

PCB-1016	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1254	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	12/02/19	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	93		%	10	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	87		%	10	12/02/19	SC	30 - 150 %
% TCMX	88		%	10	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	84		%	10	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	530	mg/kg	10	12/04/19	JRB	SW8015D DRO
Fuel Oil #4	ND	530	mg/kg	10	12/04/19	JRB	SW8015D DRO
Fuel Oil #6	ND	530	mg/kg	10	12/04/19	JRB	SW8015D DRO
Kerosene	ND	530	mg/kg	10	12/04/19	JRB	SW8015D DRO
Motor Oil	ND	530	mg/kg	10	12/04/19	JRB	SW8015D DRO
Other Oil	**	530	mg/kg	10	12/04/19	JRB	SW8015D DRO
Unidentified	2600	530	mg/kg	10	12/04/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	67		%	10	12/04/19	JRB	50 - 150 %
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### **Volatiles**

1,1,1,2-Tetrachloroethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,1-Dichloroethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,1-Dichloroethene	ND	3000	ug/Kg	1000	11/30/19	JLI	SW8260C
1,1-Dichloropropene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2,4-Trimethylbenzene	57000	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2-Dibromoethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2-Dichloroethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,2-Dichloropropane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	3000	ug/Kg	1000	11/30/19	JLI	SW8260C
1,3-Dichloropropane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
2-Chlorotoluene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
2-Hexanone	ND	30000	ug/Kg	1000	11/30/19	JLI	SW8260C
2-Isopropyltoluene	4100	3600	ug/Kg	1000	11/30/19	JLI	SW8260C
4-Chlorotoluene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Acetone	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Acrylonitrile	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Benzene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Bromobenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Bromochloromethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Bromodichloromethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Bromoform	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Bromomethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Carbon Disulfide	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Carbon tetrachloride	ND	5000	ug/Kg	1000	11/30/19	JLI	SW8260C
Chlorobenzene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Chloroethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Chloroform	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Chloromethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Dibromochloromethane	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Dibromomethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Dichlorodifluoromethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Ethylbenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Hexachlorobutadiene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Isopropylbenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
m&p-Xylene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Methylene chloride	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Naphthalene	ND	4000	ug/Kg	1000	11/30/19	JLI	SW8260C
n-Butylbenzene	16000	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
n-Propylbenzene	8800	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
o-Xylene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
p-Isopropyltoluene	13000	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
sec-Butylbenzene	14000	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Styrene	ND	3000	ug/Kg	1000	11/30/19	JLI	SW8260C
tert-Butylbenzene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Tetrachloroethene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12000	ug/Kg	1000	11/30/19	JLI	SW8260C
Toluene	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
Total Xylenes	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12000	ug/Kg	1000	11/30/19	JLI	SW8260C
Trichloroethene	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
Trichlorofluoromethane	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	12000	ug/Kg	1000	11/30/19	JLI	SW8260C
Vinyl chloride	ND	2400	ug/Kg	1000	11/30/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4 (1000x)	99		%	1000	11/30/19	JLI	70 - 130 %
% Bromofluorobenzene (1000x)	119		%	1000	11/30/19	JLI	70 - 130 %
% Dibromofluoromethane (1000x)	97		%	1000	11/30/19	JLI	70 - 130 %
% Toluene-d8 (1000x)	98		%	1000	11/30/19	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	49000	ug/Kg	1000	11/30/19	JLI	SW8260C (OXY)
Diethyl ether	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	6100	ug/Kg	1000	11/30/19	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dichlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dimethylphenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chloronaphthalene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chlorophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylnaphthalene	300	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitrophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
3-Nitroaniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloroaniline	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitroaniline	ND	550	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitrophenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthylene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Acetophenone	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Aniline	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Anthracene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzidine	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(a)pyrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Benzoic acid	ND	690	ug/Kg	1	12/02/19	KCA	SW8270D
Benzyl butyl phthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	750	240	ug/Kg	1	12/02/19	KCA	SW8270D
Carbazole	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Chrysene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenzofuran	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Diethyl phthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Dimethylphthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-octylphthalate	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Fluoranthene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Fluorene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobutadiene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachloroethane	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Isophorone	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Naphthalene	810	240	ug/Kg	1	12/02/19	KCA	SW8270D
Nitrobenzene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
Phenanthrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Phenol	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Pyrene	ND	240	ug/Kg	1	12/02/19	KCA	SW8270D
Pyridine	ND	350	ug/Kg	1	12/02/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	85		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol	106		%	1	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5	61		%	1	12/02/19	KCA	30 - 130 %
% Phenol-d5	125		%	1	12/02/19	KCA	30 - 130 %
% Terphenyl-d14	51		%	1	12/02/19	KCA	30 - 130 %
Field Extraction	Completed				11/22/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	5700	75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	4400	75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	1300	75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
Benzene	ND	0.37	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
Ethyl Benzene	16	0.75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
MTBE	ND	0.75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
Naphthalene	ND	3.7	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
Toluene	ND	0.75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
m,p-Xylenes	4.6	0.75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
o-Xylene	5.3	0.75	mg/Kg	1000	11/27/19	RM	MA VPH 5/2004
<b><u>QA/QC Surrogates</u></b>							
% 2,5-Dibromotoluene (FID)	100		%	1000	11/27/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	98		%	1000	11/27/19	RM	70 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

#### **VPH:**

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **Volatile Comment:**

Elevated reporting limits for volatiles due to the presence of target and/or non-target compounds.

#### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C16. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date

11/22/19 10:00  
11/26/19 18:25

### Time

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68612

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: STOCKPILE W

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	7.64	0.68	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	110	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	0.47	0.27	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	1.39	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	15.4	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	0.69	0.07	mg/Kg	5	12/04/19	RS	SW7471B
Nickel	12.4	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	457	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/30/19	TH	SW6010D
TCLP Lead	0.16	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.0	3.0	mg/Kg	1	11/30/19	CPP	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	23.2	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	179	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	88		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	159	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	7.39	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	130	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	69		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	63		%	2	12/02/19	SC	30 - 150 %
% TCMX	61		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	54		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	12/03/19	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	12/03/19	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	12/03/19	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	12/03/19	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	12/03/19	JRB	SW8015D DRO
Other Oil	**	55	mg/kg	1	12/03/19	JRB	SW8015D DRO
Unidentified	150	55	mg/kg	1	12/03/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	69		%	1	12/03/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Methylnaphthalene	280	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	12/03/19	KCA	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Acenaphthene	720	260	ug/Kg	1	12/03/19	KCA	SW8270D
Acenaphthylene	540	260	ug/Kg	1	12/03/19	KCA	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Aniline	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
Anthracene	2700	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benz(a)anthracene	9500	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Benzidine	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(a)pyrene	8400	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Benzo(b)fluoranthene	6600	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(ghi)perylene	3600	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzo(k)fluoranthene	4800	260	ug/Kg	1	12/03/19	KCA	SW8270D
Benzoic acid	ND	750	ug/Kg	1	12/03/19	KCA	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Carbazole	670	380	ug/Kg	1	12/03/19	KCA	SW8270D
Chrysene	8400	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Dibenz(a,h)anthracene	1400	260	ug/Kg	1	12/03/19	KCA	SW8270D
Dibenzofuran	530	260	ug/Kg	1	12/03/19	KCA	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Fluoranthene	15000	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Fluorene	710	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	4700	260	ug/Kg	1	12/03/19	KCA	SW8270D
Isophorone	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Naphthalene	490	260	ug/Kg	1	12/03/19	KCA	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
Phenanthrene	6500	260	ug/Kg	1	12/03/19	KCA	SW8270D
Phenol	ND	260	ug/Kg	1	12/03/19	KCA	SW8270D
Pyrene	13000	2600	ug/Kg	10	12/03/19	KCA	SW8270D
Pyridine	ND	380	ug/Kg	1	12/03/19	KCA	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	84		%	1	12/03/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	69		%	1	12/03/19	KCA	30 - 130 %
% 2-Fluorophenol	63		%	1	12/03/19	KCA	30 - 130 %
% Nitrobenzene-d5	70		%	1	12/03/19	KCA	30 - 130 %
% Phenol-d5	74		%	1	12/03/19	KCA	30 - 130 %
% Terphenyl-d14	58		%	1	12/03/19	KCA	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/03/19	KCA	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

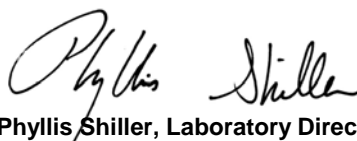
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **TPH Comment:**

**\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C16 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

### Date

11/22/19 10:00  
11/26/19 18:25

### Time

## Laboratory Data

SDG ID: GCE68606  
Phoenix ID: CE68613

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: STOCKPILE E

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Arsenic	7.18	0.68	mg/Kg	1	11/30/19	CPP	SW6010D
Barium	130	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Beryllium	0.42	0.27	mg/Kg	1	11/30/19	CPP	SW6010D
Cadmium	1.59	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Chromium	16.1	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Mercury	0.60	0.07	mg/Kg	5	12/04/19	RS	SW7471B
Nickel	15.1	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Lead	251	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	11/30/19	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	11/30/19	TH	SW6010D
TCLP Lead	0.28	0.10	mg/L	1	12/11/19	CPP	SW846 1311/6010
Thallium	< 3.0	3.0	mg/Kg	1	11/30/19	CPP	SW6010D
TCLP Metals Digestion	Completed				12/11/19	LS/LS	SW3010A
Vanadium	42.8	0.34	mg/Kg	1	11/30/19	CPP	SW6010D
Zinc	200	0.7	mg/Kg	1	11/30/19	CPP	SW6010D
Percent Solid	90		%		11/27/19	VT	SW846-%Solid
Conductivity - Soil Matrix	51	5	umhos/cm	1	11/26/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	11/26/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/03/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/03/19	BJA	SW846-Ignit
pH at 25C - Soil	7.79	1.00	pH Units	1	11/26/19 23:56	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/03/19	EG	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/03/19	EG	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/03/19	EG	SW846-React
Soil Extraction for PCB	Completed				11/27/19	ZB/E	SW3545A
Soil Extraction for SVOA	Completed				11/27/19	R/K/ALE	SW3545A
Mercury Digestion	Completed				12/04/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/10/19	LS	SW1311
Total Metals Digest	Completed				11/27/19	JJ/BF	SW3050B
Extraction of TPH SM	Completed				11/27/19	GG/ALE	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1254	120	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/02/19	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/02/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	70		%	2	12/02/19	SC	30 - 150 %
% DCBP (Confirmation)	68		%	2	12/02/19	SC	30 - 150 %
% TCMX	70		%	2	12/02/19	SC	30 - 150 %
% TCMX (Confirmation)	68		%	2	12/02/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO
Fuel Oil #4	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO
Fuel Oil #6	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO
Kerosene	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO
Motor Oil	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO
Other Oil	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO
Unidentified	ND	270	mg/kg	5	12/02/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	83		%	5	12/02/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/02/19	KCA	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthene	540	260	ug/Kg	1	12/02/19	KCA	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Aniline	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
Anthracene	990	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benz(a)anthracene	3000	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benzidine	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(a)pyrene	2900	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(b)fluoranthene	2100	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(ghi)perylene	1600	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benzo(k)fluoranthene	2200	260	ug/Kg	1	12/02/19	KCA	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/02/19	KCA	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Carbazole	440	370	ug/Kg	1	12/02/19	KCA	SW8270D
Chrysene	3000	260	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenz(a,h)anthracene	510	260	ug/Kg	1	12/02/19	KCA	SW8270D
Dibenzofuran	260	260	ug/Kg	1	12/02/19	KCA	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Fluoranthene	6300	260	ug/Kg	1	12/02/19	KCA	SW8270D
Fluorene	410	260	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Indeno(1,2,3-cd)pyrene	1700	260	ug/Kg	1	12/02/19	KCA	SW8270D
Isophorone	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
Phenanthrene	5500	260	ug/Kg	1	12/02/19	KCA	SW8270D
Phenol	ND	260	ug/Kg	1	12/02/19	KCA	SW8270D
Pyrene	5700	260	ug/Kg	1	12/02/19	KCA	SW8270D
Pyridine	ND	370	ug/Kg	1	12/02/19	KCA	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	85		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorobiphenyl	60		%	1	12/02/19	KCA	30 - 130 %
% 2-Fluorophenol	48		%	1	12/02/19	KCA	30 - 130 %
% Nitrobenzene-d5	67		%	1	12/02/19	KCA	30 - 130 %
% Phenol-d5	60		%	1	12/02/19	KCA	30 - 130 %
% Terphenyl-d14	50		%	1	12/02/19	KCA	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

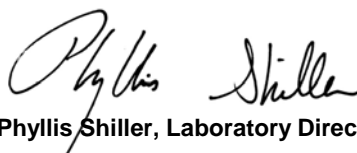
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 12, 2019**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
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## QA/QC Report

December 12, 2019

### QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 508482 (mg/kg), QC Sample No: CE68606 2X (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)													
Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	85.9	85.0	1.1	90.1	101	11.4	75 - 125	20
Comment:													

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 508201 (mg/kg), QC Sample No: CE68606 (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)

#### ICP Metals - Soil

Antimony	BRL	3.3	<3.4	<3.5	NC	94.8	86.3	9.4	84.0			75 - 125	30
Arsenic	BRL	0.67	3.36	3.48	NC	110	101	8.5	86.3			75 - 125	30
Barium	BRL	0.33	16.6	16.7	0.60	97.4	79.9	19.7	97.3			75 - 125	30
Beryllium	BRL	0.27	0.36	0.34	NC	104	93.7	10.4	96.4			75 - 125	30
Cadmium	BRL	0.33	0.38	0.48	NC	92.7	84.3	9.5	88.8			75 - 125	30
Chromium	BRL	0.33	11.6	11.7	0.90	117	103	12.7	93.8			75 - 125	30
Lead	BRL	0.33	19.2	21.6	11.8	108	95.1	12.7	89.7			75 - 125	30
Nickel	BRL	0.33	9.06	10.9	18.4	104	95.0	9.0	91.6			75 - 125	30
Selenium	BRL	1.3	<1.3	<1.4	NC	105	98.8	6.1	83.4			75 - 125	30
Silver	BRL	0.33	<0.34	<0.35	NC	110	97.9	11.6	97.2			75 - 125	30
Thallium	BRL	3.0	<3.0	<3.2	NC	109	98.9	9.7	93.2			75 - 125	30
Vanadium	BRL	0.33	19.5	23.4	18.2	111	100	10.4	96.2			75 - 125	30
Zinc	BRL	0.67	35.5	45.6	24.9	107	97.2	9.6	93.7			75 - 125	30

QA/QC Batch 509703 (mg/L), QC Sample No: CE83536 (CE68609, CE68612, CE68613)

#### ICP Metals - TCLP Extraction

Lead	BRL	0.10	13.3	15.8	17.2	96.8	97.8	1.0	120			75 - 125	20
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## QA/QC Report

December 12, 2019

### QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 508479 (mg/Kg), QC Sample No: CE68606 4.85X (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)													
Reactivity Cyanide	BRL	0.05	<5	<5.3	NC	90.4						80 - 120	20
Reactivity Sulfide	BRL	20	<20	<20	NC	100						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 508070 (umhos/cm), QC Sample No: CE68565 (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)													
Conductivity - Soil Matrix	BRL	5	227	228	0.40	104						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 508083 (PH), QC Sample No: CE68566 (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)													
pH at 25C - Soil			8.52	8.47	0.60	101						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 508524 (Degree F), QC Sample No: CE68611 (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)													
Flash Point			135	130	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													



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## QA/QC Report

December 12, 2019

### QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 508191 (mg/Kg), QC Sample No: CE68606 (CE68606, CE68607, CE68608, CE68609, CE68610, CE68612, CE68613)										
<u>TPH by GC (Extractable Products) - Soil</u>										
Ext. Petroleum H.C. (C9-C36)	ND	50	71	79	10.7	80	71	11.9	50 - 150	30
% n-Pentacosane	44	%	59	60	1.7	78	65	18.2	50 - 150	30 s

Comment:

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 508516 (mg/Kg), QC Sample No: CE70223 (CE68611)

### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	120	66	58.1				50 - 150	30 r
% n-Pentacosane	56	%	123	61	67.4				50 - 150	30 r

Comment:

\*The MS/MSD could not be analyzed because of matrix interference. The LCS was within QA/QC criteria.

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 508238 (ug/Kg), QC Sample No: CE68608 2X (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)

### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	84	85	1.2	79	83	4.9	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	89	80	10.7	88	89	1.1	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	94	%	99	91	8.4	96	98	2.1	30 - 150	30
% DCBP (Surrogate Rec) (Confirm)	93	%	106	91	15.2	94	99	5.2	30 - 150	30
% TCMX (Surrogate Rec)	87	%	92	90	2.2	86	88	2.3	30 - 150	30
% TCMX (Surrogate Rec) (Confirm)	88	%	98	95	3.1	92	94	2.2	30 - 150	30

QA/QC Batch 508181 (ug/kg), QC Sample No: CE68613 (CE68606, CE68607, CE68608, CE68609, CE68610, CE68611, CE68612, CE68613)

### Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	59	68	14.2	67	68	1.5	40 - 140	30
1,2,4-Trichlorobenzene	ND	230	58	66	12.9	69	69	0.0	40 - 140	30
1,2-Dichlorobenzene	ND	180	51	62	19.5	61	67	9.4	40 - 140	30
1,2-Diphenylhydrazine	ND	230	67	72	7.2	71	76	6.8	40 - 140	30
1,3-Dichlorobenzene	ND	230	47	56	17.5	59	59	0.0	40 - 140	30
1,4-Dichlorobenzene	ND	230	49	60	20.2	60	61	1.7	40 - 140	30
2,4,5-Trichlorophenol	ND	230	74	85	13.8	84	85	1.2	30 - 130	30
2,4,6-Trichlorophenol	ND	130	73	84	14.0	80	80	0.0	30 - 130	30
2,4-Dichlorophenol	ND	130	64	80	22.2	76	80	5.1	30 - 130	30

## QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2,4-Dimethylphenol	ND	230	70	88	22.8	78	86	9.8	30 - 130	30	
2,4-Dinitrophenol	ND	230	81	105	25.8	70	72	2.8	30 - 130	30	
2,4-Dinitrotoluene	ND	130	69	80	14.8	77	81	5.1	40 - 140	30	
2,6-Dinitrotoluene	ND	130	75	86	13.7	81	85	4.8	40 - 140	30	
2-Chloronaphthalene	ND	230	64	72	11.8	71	72	1.4	40 - 140	30	
2-Chlorophenol	ND	230	55	81	38.2	70	77	9.5	30 - 130	30	r
2-Methylnaphthalene	ND	230	61	70	13.7	70	73	4.2	40 - 140	30	
2-Methylphenol (o-cresol)	ND	230	61	93	41.6	81	96	16.9	30 - 130	30	r
2-Nitroaniline	ND	330	89	100	11.6	107	117	8.9	40 - 140	30	
2-Nitrophenol	ND	230	76	86	12.3	83	87	4.7	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	59	95	46.8	78	90	14.3	30 - 130	30	r
3,3'-Dichlorobenzidine	ND	130	51	50	2.0	64	61	4.8	40 - 140	30	
3-Nitroaniline	ND	330	67	72	7.2	85	77	9.9	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	76	94	21.2	75	77	2.6	30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	66	76	14.1	75	80	6.5	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	74	84	12.7	78	85	8.6	30 - 130	30	
4-Chloroaniline	ND	230	28	42	40.0	56	48	15.4	40 - 140	30	l,r
4-Chlorophenyl phenyl ether	ND	230	68	77	12.4	75	78	3.9	40 - 140	30	
4-Nitroaniline	ND	230	79	84	6.1	81	89	9.4	40 - 140	30	
4-Nitrophenol	ND	230	88	97	9.7	94	97	3.1	30 - 130	30	
Acenaphthene	ND	230	66	74	11.4	63	70	10.5	40 - 140	30	
Acenaphthylene	ND	130	60	69	14.0	66	68	3.0	40 - 140	30	
Acetophenone	ND	230	50	76	41.3	65	74	12.9	40 - 140	30	r
Aniline	ND	330	32	45	33.8	81	45	57.1	40 - 140	30	l,r
Anthracene	ND	230	64	69	7.5	57	62	8.4	40 - 140	30	
Benz(a)anthracene	ND	230	67	72	7.2	42	89	71.8	40 - 140	30	r
Benzidine	ND	330	<10	<10	NC	<10	<10	NC	40 - 140	30	l,m
Benzo(a)pyrene	ND	130	69	73	5.6	47	94	66.7	40 - 140	30	r
Benzo(b)fluoranthene	ND	160	65	73	11.6	53	99	60.5	40 - 140	30	r
Benzo(ghi)perylene	ND	230	58	63	8.3	56	76	30.3	40 - 140	30	
Benzo(k)fluoranthene	ND	230	66	71	7.3	51	68	28.6	40 - 140	30	
Benzoic Acid	ND	330	67	93	32.5	18	29	46.8	30 - 130	30	m,r
Benzyl butyl phthalate	ND	230	66	77	15.4	77	81	5.1	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	60	71	16.8	66	73	10.1	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	45	63	33.3	115	63	58.4	40 - 140	30	r
Bis(2-chloroisopropyl)ether	ND	230	45	61	30.2	56	63	11.8	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	68	75	9.8	77	85	9.9	40 - 140	30	
Carbazole	ND	230	63	69	9.1	61	64	4.8	40 - 140	30	
Chrysene	ND	230	63	69	9.1	36	87	82.9	40 - 140	30	m,r
Dibenz(a,h)anthracene	ND	130	67	72	7.2	77	86	11.0	40 - 140	30	
Dibenzofuran	ND	230	65	72	10.2	67	70	4.4	40 - 140	30	
Diethyl phthalate	ND	230	70	75	6.9	76	79	3.9	40 - 140	30	
Dimethylphthalate	ND	230	66	75	12.8	73	76	4.0	40 - 140	30	
Di-n-butylphthalate	ND	670	69	70	1.4	71	78	9.4	40 - 140	30	
Di-n-octylphthalate	ND	230	75	79	5.2	82	87	5.9	40 - 140	30	
Fluoranthene	ND	230	62	62	0.0	NC	NC	NC	40 - 140	30	
Fluorene	ND	230	70	79	12.1	70	76	8.2	40 - 140	30	
Hexachlorobenzene	ND	130	70	72	2.8	72	75	4.1	40 - 140	30	
Hexachlorobutadiene	ND	230	56	61	8.5	68	64	6.1	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	28	15	60.5	<10	<10	NC	40 - 140	30	l,m,r
Hexachloroethane	ND	130	52	58	10.9	63	62	1.6	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	68	72	5.7	64	85	28.2	40 - 140	30	
Isophorone	ND	130	55	64	15.1	63	66	4.7	40 - 140	30	

# QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Naphthalene	ND	230	58	66	12.9	66	67	1.5	40 - 140	30	
Nitrobenzene	ND	130	58	84	36.6	74	84	12.7	40 - 140	30	r
N-Nitrosodimethylamine	ND	230	37	43	15.0	38	44	14.6	40 - 140	30	l,m
N-Nitrosodi-n-propylamine	ND	130	57	89	43.8	75	89	17.1	40 - 140	30	r
N-Nitrosodiphenylamine	ND	130	66	73	10.1	70	75	6.9	40 - 140	30	
Pentachloronitrobenzene	ND	230	69	77	11.0	77	79	2.6	40 - 140	30	
Pentachlorophenol	ND	230	88	90	2.2	82	83	1.2	30 - 130	30	
Phenanthrene	ND	130	64	69	7.5	NC	NC	NC	40 - 140	30	
Phenol	ND	230	58	88	41.1	74	80	7.8	30 - 130	30	r
Pyrene	ND	230	63	62	1.6	NC	NC	NC	40 - 140	30	
Pyridine	ND	230	<10	<10	NC	<10	<10	NC	40 - 140	30	l,m
% 2,4,6-Tribromophenol	60	%	83	86	3.6	83	90	8.1	30 - 130	30	
% 2-Fluorobiphenyl	55	%	57	66	14.6	65	65	0.0	30 - 130	30	
% 2-Fluorophenol	47	%	47	69	37.9	57	63	10.0	30 - 130	30	r
% Nitrobenzene-d5	58	%	56	83	38.8	73	80	9.2	30 - 130	30	r
% Phenol-d5	53	%	54	84	43.5	68	75	9.8	30 - 130	30	r
% Terphenyl-d14	58	%	53	54	1.9	52	54	3.8	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 508526 (ug/kg), QC Sample No: CE68606 (CE68606, CE68608, CE68610)

## Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	99	100	1.0	94			70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	95	101	6.1	83			70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	99	103	4.0	106			70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	95	96	1.0	90			70 - 130	30	
1,1-Dichloroethane	ND	5.0	93	103	10.2	91			70 - 130	30	
1,1-Dichloroethene	ND	5.0	94	101	7.2	88			70 - 130	30	
1,1-Dichloropropene	ND	5.0	99	98	1.0	87			70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	100	106	5.8	48			70 - 130	30	m
1,2,3-Trichloropropane	ND	5.0	98	105	6.9	106			70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	101	106	4.8	53			70 - 130	30	m
1,2,4-Trimethylbenzene	ND	1.0	95	99	4.1	89			70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	96	109	12.7	93			70 - 130	30	
1,2-Dibromoethane	ND	5.0	95	99	4.1	94			70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	93	96	3.2	80			70 - 130	30	
1,2-Dichloroethane	ND	5.0	94	95	1.1	89			70 - 130	30	
1,2-Dichloropropane	ND	5.0	95	97	2.1	92			70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	96	100	4.1	89			70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	94	98	4.2	83			70 - 130	30	
1,3-Dichloropropane	ND	5.0	96	98	2.1	97			70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	93	96	3.2	81			70 - 130	30	
1,4-dioxane	ND	100	110	100	9.5	110			40 - 160	30	
2,2-Dichloropropane	ND	5.0	100	105	4.9	84			70 - 130	30	
2-Chlorotoluene	ND	5.0	94	97	3.1	91			70 - 130	30	
2-Hexanone	ND	25	96	106	9.9	85			40 - 160	30	
2-Isopropyltoluene	ND	5.0	103	108	4.7	91			70 - 130	30	
4-Chlorotoluene	ND	5.0	93	97	4.2	87			70 - 130	30	
4-Methyl-2-pentanone	ND	25	103	113	9.3	101			40 - 160	30	
Acetone	ND	10	86	93	7.8	85			40 - 160	30	
Acrylonitrile	ND	5.0	100	113	12.2	86			70 - 130	30	
Benzene	ND	1.0	95	98	3.1	92			70 - 130	30	

# QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Bromobenzene	ND	5.0	94	96	2.1	94			70 - 130	30
Bromochloromethane	ND	5.0	101	107	5.8	93			70 - 130	30
Bromodichloromethane	ND	5.0	99	100	1.0	90			70 - 130	30
Bromoform	ND	5.0	102	105	2.9	87			70 - 130	30
Bromomethane	ND	5.0	105	116	10.0	104			40 - 160	30
Carbon Disulfide	ND	5.0	101	109	7.6	91			70 - 130	30
Carbon tetrachloride	ND	5.0	98	105	6.9	83			70 - 130	30
Chlorobenzene	ND	5.0	94	98	4.2	89			70 - 130	30
Chloroethane	ND	5.0	105	104	1.0	99			70 - 130	30
Chloroform	ND	5.0	96	102	6.1	84			70 - 130	30
Chloromethane	ND	5.0	108	115	6.3	99			40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	101	105	3.9	84			70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	98	100	2.0	91			70 - 130	30
Dibromochloromethane	ND	3.0	102	104	1.9	95			70 - 130	30
Dibromomethane	ND	5.0	93	97	4.2	90			70 - 130	30
Dichlorodifluoromethane	ND	5.0	123	130	5.5	109			40 - 160	30
Diethyl ether	ND	5.0	98	97	1.0	>200			70 - 130	30 m
Di-isopropyl ether	ND	5.0	105	112	6.5	104			70 - 130	30
Ethyl tert-butyl ether	ND	5.0	104	112	7.4	103			70 - 130	30
Ethylbenzene	ND	1.0	95	98	3.1	91			70 - 130	30
Hexachlorobutadiene	ND	5.0	99	104	4.9	52			70 - 130	30 m
Isopropylbenzene	ND	1.0	97	101	4.0	97			70 - 130	30
m&p-Xylene	ND	2.0	94	98	4.2	89			70 - 130	30
Methyl ethyl ketone	ND	5.0	107	110	2.8	81			40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	107	109	1.9	96			70 - 130	30
Methylene chloride	ND	5.0	91	88	3.4	NC			70 - 130	30
Naphthalene	ND	5.0	110	120	8.7	70			70 - 130	30
n-Butylbenzene	ND	1.0	97	103	6.0	75			70 - 130	30
n-Propylbenzene	ND	1.0	94	100	6.2	92			70 - 130	30
o-Xylene	ND	2.0	98	101	3.0	91			70 - 130	30
p-Isopropyltoluene	ND	1.0	96	102	6.1	83			70 - 130	30
sec-Butylbenzene	ND	1.0	101	108	6.7	90			70 - 130	30
Styrene	ND	5.0	97	99	2.0	87			70 - 130	30
tert-amyl methyl ether	ND	5.0	104	105	1.0	102			70 - 130	30
tert-Butylbenzene	ND	1.0	95	100	5.1	89			70 - 130	30
Tetrachloroethene	ND	5.0	94	99	5.2	85			70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	99	112	12.3	90			70 - 130	30
Toluene	ND	1.0	95	99	4.1	91			70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	98	98	0.0	86			70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	97	99	2.0	88			70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	108	117	8.0	106			70 - 130	30
Trichloroethene	ND	5.0	93	96	3.2	87			70 - 130	30
Trichlorofluoromethane	ND	5.0	104	111	6.5	92			70 - 130	30
Trichlorotrifluoroethane	ND	5.0	100	105	4.9	91			70 - 130	30
Vinyl chloride	ND	5.0	99	105	5.9	96			70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	100	100	0.0	98			70 - 130	30
% Bromofluorobenzene	96	%	99	100	1.0	96			70 - 130	30
% Dibromofluoromethane	107	%	104	103	1.0	95			70 - 130	30
% Toluene-d8	100	%	101	100	1.0	99			70 - 130	30

Comment:

The MSD is not reported for this LL soil batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.



## QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 508526H (ug/kg), QC Sample No: CE68606 50X (CE68611 (1000X) )										
<u>Volatiles - Soil (High Level)</u>										
1,1,1,2-Tetrachloroethane	ND	250	98	97	1.0	92	92	0.0	70 - 130	30
1,1,1-Trichloroethane	ND	250	92	82	11.5	76	85	11.2	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	250	97	97	0.0	94	94	0.0	70 - 130	30
1,1,2-Trichloroethane	ND	250	92	90	2.2	88	88	0.0	70 - 130	30
1,1-Dichloroethane	ND	250	90	84	6.9	77	85	9.9	70 - 130	30
1,1-Dichloroethene	ND	250	84	72	15.4	68	85	22.2	70 - 130	30 m
1,1-Dichloropropene	ND	250	94	104	10.1	97	95	2.1	70 - 130	30
1,2,3-Trichlorobenzene	ND	250	106	102	3.8	116	111	4.4	70 - 130	30
1,2,3-Trichloropropane	ND	250	92	93	1.1	91	91	0.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	250	111	109	1.8	113	109	3.6	70 - 130	30
1,2,4-Trimethylbenzene	ND	250	97	96	1.0	94	94	0.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	250	97	97	0.0	93	90	3.3	70 - 130	30
1,2-Dibromoethane	ND	250	94	94	0.0	90	91	1.1	70 - 130	30
1,2-Dichlorobenzene	ND	250	98	97	1.0	93	93	0.0	70 - 130	30
1,2-Dichloroethane	ND	250	91	91	0.0	87	87	0.0	70 - 130	30
1,2-Dichloropropane	ND	250	94	94	0.0	92	91	1.1	70 - 130	30
1,3,5-Trimethylbenzene	ND	250	97	96	1.0	92	93	1.1	70 - 130	30
1,3-Dichlorobenzene	ND	250	98	98	0.0	92	92	0.0	70 - 130	30
1,3-Dichloropropane	ND	250	96	96	0.0	91	92	1.1	70 - 130	30
1,4-Dichlorobenzene	ND	250	98	96	2.1	91	91	0.0	70 - 130	30
1,4-dioxane	ND	5000	102	107	4.8	99	103	4.0	40 - 160	30
2,2-Dichloropropane	ND	250	95	85	11.1	73	84	14.0	70 - 130	30
2-Chlorotoluene	ND	250	94	93	1.1	90	90	0.0	70 - 130	30
2-Hexanone	ND	1300	95	97	2.1	93	91	2.2	40 - 160	30
2-Isopropyltoluene	ND	250	105	106	0.9	101	102	1.0	70 - 130	30
4-Chlorotoluene	ND	250	94	94	0.0	90	90	0.0	70 - 130	30
4-Methyl-2-pentanone	ND	1300	99	100	1.0	97	95	2.1	40 - 160	30
Acetone	ND	500	65	60	8.0	61	62	1.6	40 - 160	30
Acrylonitrile	ND	250	94	82	13.6	77	81	5.1	70 - 130	30
Benzene	ND	250	96	117	19.7	110	92	17.8	70 - 130	30
Bromobenzene	ND	250	93	93	0.0	88	89	1.1	70 - 130	30
Bromochloromethane	ND	250	100	87	13.9	76	88	14.6	70 - 130	30
Bromodichloromethane	ND	250	95	92	3.2	86	87	1.2	70 - 130	30
Bromoform	ND	250	96	95	1.0	85	85	0.0	70 - 130	30
Bromomethane	ND	250	86	77	11.0	66	83	22.8	40 - 160	30
Carbon Disulfide	ND	250	86	78	9.8	71	85	17.9	70 - 130	30
Carbon tetrachloride	ND	250	92	82	11.5	74	82	10.3	70 - 130	30
Chlorobenzene	ND	250	96	96	0.0	92	93	1.1	70 - 130	30
Chloroethane	ND	250	43	37	15.0	35	40	13.3	70 - 130	30 l,m
Chloroform	ND	250	93	83	11.4	73	84	14.0	70 - 130	30
Chloromethane	ND	250	111	93	17.6	87	98	11.9	40 - 160	30
cis-1,2-Dichloroethene	ND	250	88	87	1.1	72	87	18.9	70 - 130	30
cis-1,3-Dichloropropene	ND	250	97	94	3.1	89	90	1.1	70 - 130	30
Dibromochloromethane	ND	150	97	95	2.1	88	89	1.1	70 - 130	30
Dibromomethane	ND	250	90	89	1.1	85	86	1.2	70 - 130	30
Dichlorodifluoromethane	ND	250	115	101	13.0	92	105	13.2	40 - 160	30
Diethyl ether	ND	250	62	55	12.0	67	72	7.2	70 - 130	30 l,m
Di-isopropyl ether	ND	250	101	93	8.2	82	99	18.8	70 - 130	30
Ethyl tert-butyl ether	ND	250	104	93	11.2	82	94	13.6	70 - 130	30
Ethylbenzene	ND	250	99	98	1.0	94	96	2.1	70 - 130	30

# QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Hexachlorobutadiene	ND	250	104	105	1.0	100	100	0.0	70 - 130	30
Isopropylbenzene	ND	250	95	96	1.0	93	92	1.1	70 - 130	30
m&p-Xylene	ND	250	97	98	1.0	94	95	1.1	70 - 130	30
Methyl ethyl ketone	ND	250	97	95	2.1	85	89	4.6	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	250	103	84	20.3	82	91	10.4	70 - 130	30
Methylene chloride	ND	250	79	70	12.1	69	74	7.0	70 - 130	30 m
Naphthalene	ND	250	110	109	0.9	128	121	5.6	70 - 130	30
n-Butylbenzene	ND	250	102	102	0.0	97	98	1.0	70 - 130	30
n-Propylbenzene	ND	250	96	96	0.0	91	91	0.0	70 - 130	30
o-Xylene	ND	250	100	100	0.0	96	98	2.1	70 - 130	30
p-Isopropyltoluene	ND	250	100	99	1.0	96	96	0.0	70 - 130	30
sec-Butylbenzene	ND	250	102	103	1.0	99	100	1.0	70 - 130	30
Styrene	ND	250	101	100	1.0	96	96	0.0	70 - 130	30
tert-amyl methyl ether	ND	250	104	104	0.0	114	98	15.1	70 - 130	30
tert-Butylbenzene	ND	250	95	95	0.0	92	93	1.1	70 - 130	30
Tetrachloroethene	ND	250	97	98	1.0	94	93	1.1	70 - 130	30
Tetrahydrofuran (THF)	ND	250	91	87	4.5	85	91	6.8	70 - 130	30
Toluene	ND	250	95	96	1.0	93	93	0.0	70 - 130	30
trans-1,2-Dichloroethene	ND	250	97	80	19.2	78	85	8.6	70 - 130	30
trans-1,3-Dichloropropene	ND	250	94	92	2.2	86	86	0.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	250	104	105	1.0	94	94	0.0	70 - 130	30
Trichloroethene	ND	250	94	93	1.1	90	91	1.1	70 - 130	30
Trichlorofluoromethane	ND	250	31	26	17.5	24	28	15.4	70 - 130	30 l,m
Trichlorotrifluoroethane	ND	250	90	78	14.3	77	89	14.5	70 - 130	30
Vinyl chloride	ND	250	104	89	15.5	87	98	11.9	70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	101	101	0.0	102	101	1.0	70 - 130	30
% Bromofluorobenzene	97	%	101	103	2.0	101	101	0.0	70 - 130	30
% Dibromofluoromethane	94	%	99	90	9.5	86	96	11.0	70 - 130	30
% Toluene-d8	99	%	100	100	0.0	99	100	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 508344 (mg/Kg), QC Sample No: CE68574 (CE68610 (50X) , CE68611 (1000X) )

## Volatile Petroleum Hydrocarbons - Soil

Benzene	ND	0.25	98	98	0.0	97	95	2.1	70 - 130	30
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.0	113	108	4.5	111	106	4.6	70 - 130	30
C9-C10 Aromatic Hydrocarbons *1	ND	1.7	102	102	0.0	102	100	2.0	70 - 130	30
C9-C12 Aliphatic Hydrocarbons *1,	ND	5.0	95	95	0.0	105	98	6.9	70 - 130	30
Ethyl Benzene	ND	0.25	100	100	0.0	99	97	2.0	70 - 130	30
m,p-Xylenes	ND	0.25	100	100	0.0	100	97	3.0	70 - 130	30
MTBE	ND	0.050	101	103	2.0	100	101	1.0	70 - 130	30
Naphthalene	ND	0.25	105	105	0.0	99	101	2.0	70 - 130	30
o-Xylene	ND	0.25	98	98	0.0	98	96	2.1	70 - 130	30
Toluene	ND	0.25	98	98	0.0	97	95	2.1	70 - 130	30
Unadjusted C5-C8 Aliphatics (*1)	ND	5.0	113	108	4.5	111	106	4.6	70 - 130	30
Unadjusted C9-C12 Aliphatics (*1)	ND	5.0	95	95	0.0	105	98	6.9	70 - 130	30
% 2,5-Dibromotoluene (PID)	88	%	101	97	4.0	100	102	2.0	70 - 130	30

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.

s = This parameter is outside laboratory Blank Surrogate specified recovery limits.


## QA/QC Data

SDG I.D.: GCE68606

Parameter	Blank		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
		Blk RL								

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference  
LCS - Laboratory Control Sample  
LCSD - Laboratory Control Sample Duplicate  
MS - Matrix Spike  
MS Dup - Matrix Spike Duplicate  
NC - No Criteria  
Intf - Interference



Phyllis Shiller, Laboratory Director  
December 12, 2019

Thursday, December 12, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

GCE68606 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE68609	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2800	250	2000	2000	ug/Kg
CE68609	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2800	250	2000	2000	ug/Kg
CE68609	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.10	0.10	0.01	0.01	mg/L
CE68609	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.10	0.10	0.015	0.015	mg/L
CE68611	\$8260MAR	Bromomethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	500	500	ug/Kg
CE68611	\$8260MAR	Chlorobenzene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	Chloroform	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	200	200	ug/Kg
CE68611	\$8260MAR	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	10	10	ug/Kg
CE68611	\$8260MAR	Bromoform	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Methyl t-butyl ether (MTBE)	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Acetone	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	6100	6000	6000	ug/Kg
CE68611	\$8260MAR	Methylene chloride	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	6100	100	100	ug/Kg
CE68611	\$8260MAR	Tetrachloroethene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	trans-1,2-Dichloroethene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	Dibromochloromethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	5	5	ug/Kg
CE68611	\$8260MAR	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	10	10	ug/Kg
CE68611	\$8260MAR	Benzene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	2000	2000	ug/Kg
CE68611	\$8260MAR	Methyl Ethyl Ketone	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	6100	4000	4000	ug/Kg
CE68611	\$8260MAR	4-Methyl-2-pentanone	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	6100	400	400	ug/Kg
CE68611	\$8260MAR	1,2-Dichloropropane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,2-Dichloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,2-Dibromoethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,1-Dichloropropene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	1,1-Dichloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	400	400	ug/Kg
CE68611	\$8260MAR	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	5	5	ug/Kg
CE68611	\$8260MAR	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Bromodichloromethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Trichloroethene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	300	300	ug/Kg
CE68611	\$8260MAR	trans-1,4-dichloro-2-butene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	12000	10000	10000	ug/Kg
CE68611	\$8260MAR	Vinyl chloride	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	2400	700	700	ug/Kg
CE68611	\$8260MAR	1,2-Dibromoethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Bromomethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	500	500	ug/Kg
CE68611	\$8260MAR	Bromoform	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Benzene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	2000	2000	ug/Kg
CE68611	\$8260MAR	Dibromochloromethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	5	5	ug/Kg
CE68611	\$8260MAR	Acetone	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	6100	6000	6000	ug/Kg
CE68611	\$8260MAR	4-Methyl-2-pentanone	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	6100	400	400	ug/Kg
CE68611	\$8260MAR	Chlorobenzene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	1,2-Dichloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg

Thursday, December 12, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

### GCE68606 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE68611	\$8260MAR	Bromodichloromethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,1-Dichloropropene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	1,1-Dichloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	400	400	ug/Kg
CE68611	\$8260MAR	1,1,2-Trichloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,1,2,2-Tetrachloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	5	5	ug/Kg
CE68611	\$8260MAR	1,1,1,2-Tetrachloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	1,2-Dichloropropane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	Methyl t-butyl ether (MTBE)	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	100	100	ug/Kg
CE68611	\$8260MAR	trans-1,2-Dichloroethene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	Chloroform	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	400	400	ug/Kg
CE68611	\$8260MAR	Trichloroethene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	300	300	ug/Kg
CE68611	\$8260MAR	Tetrachloroethene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	1000	1000	ug/Kg
CE68611	\$8260MAR	Methylene chloride	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	6100	100	100	ug/Kg
CE68611	\$8260MAR	cis-1,2-Dichloroethene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	300	300	ug/Kg
CE68611	\$8260MAR	Vinyl chloride	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	2400	900	900	ug/Kg
CE68611	\$8260MAR	Methyl Ethyl Ketone	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	6100	4000	4000	ug/Kg
CE68611	\$MCPADD-SM	1,4-Dioxane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	49000	200	200	ug/Kg
CE68611	\$MCPADD-SM	1,4-Dioxane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	49000	200	200	ug/Kg
CE68611	\$TPH_SMR	Unidentified	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2600	530	1000	1000	mg/kg
CE68611	\$VPHRANGE-S	C9-C12 Aliphatic Hydrocarbons *1,3	MA / CMR 310.40.1600 / S1 (mg/kg)	4400	75	1000	1000	mg/Kg
CE68611	\$VPHRANGE-S	C9-C12 Aliphatic Hydrocarbons *1,3	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	4400	75	1000	1000	mg/Kg
CE68611	\$VPHRANGE-S	C9-C10 Aromatic Hydrocarbons *1	MA / CMR 310.40.1600 / S1 (mg/kg)	1300	75	100	100	mg/Kg
CE68611	\$VPHRANGE-S	MTBE	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	0.75	0.1	0.1	mg/Kg
CE68611	\$VPHRANGE-S	MTBE	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	0.75	0.1	0.1	mg/Kg
CE68611	\$VPHRANGE-S	C9-C10 Aromatic Hydrocarbons *1	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1300	75	100	100	mg/Kg
CE68612	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	8400	2600	2000	2000	ug/Kg
CE68612	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	1400	260	700	700	ug/Kg
CE68612	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	9500	2600	7000	7000	ug/Kg
CE68612	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	8400	2600	2000	2000	ug/Kg
CE68612	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	9500	2600	7000	7000	ug/Kg
CE68612	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1400	260	700	700	ug/Kg
CE68612	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	457	0.34	200	200	mg/Kg
CE68612	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	457	0.34	200	200	mg/Kg
CE68612	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.16	0.10	0.01	0.01	mg/L
CE68612	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.16	0.10	0.015	0.015	mg/L
CE68613	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2900	260	2000	2000	ug/Kg
CE68613	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2900	260	2000	2000	ug/Kg
CE68613	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	251	0.34	200	200	mg/Kg
CE68613	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	251	0.34	200	200	mg/Kg
CE68613	TCLP-PB	TCLP Lead	MA / CMR 310.40.1600 / GW-1 (mg/l)	0.28	0.10	0.01	0.01	mg/L

Thursday, December 12, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

### GCE68606 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE68613	TCLP-PB	TCLP Lead	MA / GROUNDWATER STANDARDS / GW-1	0.28	0.10	0.015	0.015	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

December 12, 2019

SDG I.D.: GCE68606

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

### **SVOA Narration**

#### **CHEM05 12/06/19-1:** CE68606

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.096 (0.1), Hexachlorobenzene 0.094 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.098 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

#### **CHEM19 12/02/19-1:** CE68609, CE68612

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.058 (0.1), Hexachlorobenzene 0.087 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.079 (0.1), Hexachlorobenzene 0.092 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

#### **CHEM19 12/03/19-1:** CE68607

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.058 (0.1), Hexachlorobenzene 0.087 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.074 (0.1), Hexachlorobenzene 0.099 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

#### **CHEM29 12/02/19-1:** CE68612



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

December 12, 2019

SDG I.D.: GCE68606

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.061 (0.1), Hexachlorobenzene 0.085 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.067 (0.1), Hexachlorobenzene 0.089 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### VOA Narration

**CHEM31 11/30/19-1:** CE68606, CE68608, CE68610, CE68611

The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 22% (20%), Naphthalene 31% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.





~~GCE68606~~ GCE68606

**Tara Banning**

---

**From:** mberger@ABCSOILS.COM  
**Sent:** Tuesday, December 10, 2019 8:38 PM  
**To:** Tara Banning  
**Cc:** Sarah Bell  
**Subject:** TCLP Rush request  
**Attachments:** Nov 2019 MB Working Copy GCE68606 Excel 515 SOMERVILLE AVE SOMERVILLE MA-1.xls; Nov 2019 MB Working Copy GCE67594 Excel 515 SOMERVILLE AVE SOMERVILLE MA-1.xls

Regarding the attached two reports, we are requesting 24 hour turnaround for TCLP lead testing on the following samples; thank you!

Stockpile East

Stockpile

West

CP-5E3

CP-5E6

CP-5N3

CP-5N6

CP-5S6

CP 5W3

CP-5W6

CP-5S3

CP-19 0-3

CP-9 0-3 FT

Sincerely,

Marcia

Marcia J. Berger, P.E., L.S.P.

President

ABC SOILS, INC./CLEAN PROPERTIES, INC.

111 Boston Post Road, Suite 211

Sudbury, MA 01776

Tel: (617)848-1200 direct // (800)893-1222

e-mail: [mberger@abcsoils.com](mailto:mberger@abcsoils.com)



Tuesday, December 24, 2019

Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

Project ID: 515 SOMERVILLE AVE.  
SDG ID: GCE87838  
Sample ID#s: CE87838 - CE87855

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
UT Lab Registration #CT00007  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

December 24, 2019

SDG I.D.: GCE87838

Project ID: 515 SOMERVILLE AVE.

---

Client Id	Lab Id	Matrix
STOCKPILE W2	CE87838	SOIL
STOCKPILE E2	CE87839	SOIL
ABOVE AVL	CE87840	SOIL
LOAM PILE 1	CE87841	SOIL
LOAM PILE 2	CE87842	SOIL
LOC 2 0-6	CE87843	SOIL
LOC 2 6-12	CE87844	SOIL
LOC 3 0-6	CE87845	SOIL
LOC 3 6-12	CE87846	SOIL
LOC 8 0-6	CE87847	SOIL
LOC 8 6-12	CE87848	SOIL
LOC 15 3-6	CE87849	SOIL
LOC 15 6-12	CE87850	SOIL
LOC 15 0-3	CE87851	SOIL
LOC 14 0-6	CE87852	SOIL
LOC 14 6-12	CE87853	SOIL
LOC 10 0-6	CE87854	SOIL
LOC 10 6-12	CE87855	SOIL



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19  
12/13/19 17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87838

Project ID: 515 SOMERVILLE AVE.  
Client ID: STOCKPILE W2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	6.15	0.72	mg/Kg	1	12/17/19	EK	SW6010D
Barium	82.7	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	0.40	0.29	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	0.85	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Chromium	16.8	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.51	0.07	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	13.6	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Lead	280	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Lead	0.17	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.2	3.2	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	23.5	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	142	0.7	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	89		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	134	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	8.69	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

### **Polychlorinated Biphenyls**

PCB-1016	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	240	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/17/19	SC	SW8082A

### **QA/QC Surrogates**

% DCBP	84		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	82		%	2	12/17/19	SC	30 - 150 %
% TCMX	83		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	71		%	2	12/17/19	SC	30 - 150 %

### **TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Other Oil	**	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Unidentified	150	56	mg/kg	1	12/17/19	JRB	SW8015D DRO

### **QA/QC Surrogates**

% n-Pentacosane	62		%	1	12/17/19	JRB	50 - 150 %
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### **Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	360	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	580	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	490	250	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	2200	250	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	2300	250	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	1900	250	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	1400	250	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	1800	250	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	720	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	2100	250	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	350	250	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	4000	250	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1500	250	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	1800	250	ug/Kg	1	12/17/19	WB	SW8270D
Phenol	ND	250	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	3600	250	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	360	ug/Kg	1	12/17/19	WB	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	43		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	38		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	30		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	30		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	34		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	40		%	1	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

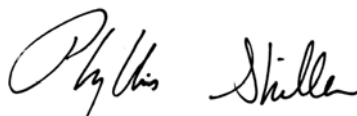
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87839

Project ID: 515 SOMERVILLE AVE.  
Client ID: STOCKPILE E2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	7.25	0.74	mg/Kg	1	12/17/19	EK	SW6010D
Barium	2290	37	mg/Kg	100	12/17/19	TH	SW6010D
Beryllium	0.38	0.30	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	1.25	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Chromium	41.5	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.59	0.07	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	15.7	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Lead	311	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Barium	0.41	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
TCLP Lead	0.31	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.3	3.3	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	35.1	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	357	0.7	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	90		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	139	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	8.57	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/18/19	K/R/AL	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/16/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	73		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	69		%	2	12/16/19	SC	30 - 150 %
% TCMX	66		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	63		%	2	12/16/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Other Oil	**	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Unidentified	170	55	mg/kg	1	12/17/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	61		%	1	12/17/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dinitrophenol	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/19/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
3-Nitroaniline	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
4-Nitroaniline	ND	580	ug/Kg	1	12/19/19	AW	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Aniline	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Anthracene	490	250	ug/Kg	1	12/19/19	AW	SW8270D
Benz(a)anthracene	1800	250	ug/Kg	1	12/19/19	AW	SW8270D
Benzidine	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(a)pyrene	1700	250	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(b)fluoranthene	1300	250	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(ghi)perylene	820	250	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(k)fluoranthene	1400	250	ug/Kg	1	12/19/19	AW	SW8270D
Benzoic acid	ND	720	ug/Kg	1	12/19/19	AW	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Carbazole	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Chrysene	1700	250	ug/Kg	1	12/19/19	AW	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Di-n-butylphthalate	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Fluoranthene	3200	250	ug/Kg	1	12/19/19	AW	SW8270D
Fluorene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Indeno(1,2,3-cd)pyrene	1000	250	ug/Kg	1	12/19/19	AW	SW8270D
Isophorone	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
N-Nitrosodimethylamine	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/19/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Pentachloronitrobenzene	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Pentachlorophenol	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
Phenanthrene	2300	250	ug/Kg	1	12/19/19	AW	SW8270D
Phenol	ND	250	ug/Kg	1	12/19/19	AW	SW8270D
Pyrene	2800	250	ug/Kg	1	12/19/19	AW	SW8270D
Pyridine	ND	360	ug/Kg	1	12/19/19	AW	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	70		%	1	12/19/19	AW	30 - 130 %
% 2-Fluorobiphenyl	62		%	1	12/19/19	AW	30 - 130 %
% 2-Fluorophenol	56		%	1	12/19/19	AW	30 - 130 %
% Nitrobenzene-d5	60		%	1	12/19/19	AW	30 - 130 %
% Phenol-d5	63		%	1	12/19/19	AW	30 - 130 %
% Terphenyl-d14	47		%	1	12/19/19	AW	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87840

Project ID: 515 SOMERVILLE AVE.  
Client ID: ABOVE AVL

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 3.7	3.7	mg/Kg	1	12/17/19	PS	SW6010D
Arsenic	11.6	0.74	mg/Kg	1	12/17/19	EK	SW6010D
Barium	188	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	0.51	0.29	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	11.0	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Chromium	111	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.62	0.07	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	147	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Lead	1770	37	mg/Kg	100	12/17/19	TH	SW6010D
Antimony	98.3	3.7	mg/Kg	1	12/17/19	PS	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Chromium	< 0.10	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
TCLP Lead	0.10	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.3	3.3	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	36.8	0.37	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	1970	74	mg/Kg	100	12/17/19	TH	SW6010D
Percent Solid	85		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	166	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	8.15	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	220	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	78	ug/Kg	2	12/17/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	86		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	84		%	2	12/17/19	SC	30 - 150 %
% TCMX	84		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	73		%	2	12/17/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	130	58	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	69		%	1	12/18/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/17/19	WB	SW8270D

Client ID: ABOVE AVL

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	610	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	340	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	310	270	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	2000	270	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	7300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	6300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	5200	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	3200	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	4300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	760	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	470	380	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	6700	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	920	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	300	270	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	18000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Fluorene	440	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	3700	270	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	9600	2700	ug/Kg	10	12/17/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	16000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	52		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	47		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	33		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	35		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	38		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	48		%	1	12/17/19	WB	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

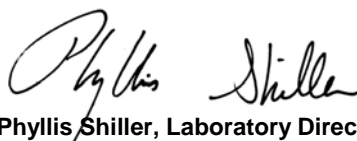
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### TPH Comment:

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19  
12/13/19 17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87841

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOAM PILE 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	9.18	0.80	mg/Kg	1	12/17/19	EK	SW6010D
Barium	283	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	0.49	0.32	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	1.26	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Chromium	24.4	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.52	0.07	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	20.8	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Lead	293	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 4.0	4.0	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Lead	0.31	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.6	3.6	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	30.7	0.40	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	284	0.8	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	82		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	181	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	8.10	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/18/19	K/R/AL	SW3545A
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	180	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	80	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	80	ug/Kg	2	12/16/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	94		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	87		%	2	12/16/19	SC	30 - 150 %
% TCMX	80		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	74		%	2	12/16/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	60	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	60	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	60	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	60	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	60	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	60	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	180	60	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	57		%	1	12/18/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
1,2-Diphenylhydrazine	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dinitrophenol	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
2-Nitroaniline	ND	400	ug/Kg	1	12/19/19	AW	SW8270D

Client ID: LOAM PILE 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
3-Nitroaniline	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
4,6-Dinitro-2-methylphenol	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
4-Bromophenyl phenyl ether	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
4-Nitroaniline	ND	640	ug/Kg	1	12/19/19	AW	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Aniline	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
Anthracene	550	280	ug/Kg	1	12/19/19	AW	SW8270D
Benz(a)anthracene	2200	280	ug/Kg	1	12/19/19	AW	SW8270D
Benzidine	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(a)pyrene	2200	280	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(b)fluoranthene	1800	280	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(ghi)perylene	1100	280	ug/Kg	1	12/19/19	AW	SW8270D
Benzo(k)fluoranthene	1800	280	ug/Kg	1	12/19/19	AW	SW8270D
Benzoic acid	ND	800	ug/Kg	1	12/19/19	AW	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-chloroethyl)ether	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Carbazole	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
Chrysene	2200	280	ug/Kg	1	12/19/19	AW	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Di-n-butylphthalate	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Fluoranthene	3900	280	ug/Kg	1	12/19/19	AW	SW8270D
Fluorene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Indeno(1,2,3-cd)pyrene	1400	280	ug/Kg	1	12/19/19	AW	SW8270D
Isophorone	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
N-Nitrosodimethylamine	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
N-Nitrosodiphenylamine	ND	400	ug/Kg	1	12/19/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
Pentachlorophenol	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
Phenanthrene	2600	280	ug/Kg	1	12/19/19	AW	SW8270D
Phenol	ND	280	ug/Kg	1	12/19/19	AW	SW8270D
Pyrene	3400	280	ug/Kg	1	12/19/19	AW	SW8270D
Pyridine	ND	400	ug/Kg	1	12/19/19	AW	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	77		%	1	12/19/19	AW	30 - 130 %
% 2-Fluorobiphenyl	62		%	1	12/19/19	AW	30 - 130 %
% 2-Fluorophenol	54		%	1	12/19/19	AW	30 - 130 %
% Nitrobenzene-d5	59		%	1	12/19/19	AW	30 - 130 %
% Phenol-d5	62		%	1	12/19/19	AW	30 - 130 %
% Terphenyl-d14	49		%	1	12/19/19	AW	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

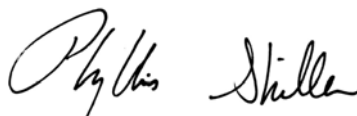
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

12/13/19

### Time

17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87842

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOAM PILE 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.43	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	8.29	0.85	mg/Kg	1	12/17/19	EK	SW6010D
Barium	135	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	0.50	0.34	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	1.39	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Chromium	31.3	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.47	0.08	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	20.4	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Lead	429	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 4.3	4.3	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.7	1.7	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Lead	0.26	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.8	3.8	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	33.4	0.43	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	212	0.9	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	76		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	306	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	7.78	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	120	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	87	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	87	ug/Kg	2	12/16/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	76		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	72		%	2	12/16/19	SC	30 - 150 %
% TCMX	67		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	66		%	2	12/16/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	130	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	130	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	130	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	130	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	130	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	130	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	180	130	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	55		%	1	12/18/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	750	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	1200	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	530	520	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	2000	520	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	2100	520	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	1600	520	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	1300	520	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	1600	520	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	1500	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	700	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	2100	520	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	3700	520	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1400	520	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	750	ug/Kg	1	12/17/19	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	2100	520	ug/Kg	1	12/17/19	WB	SW8270D
Phenol	ND	520	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	3400	520	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	55		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	40		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	22		%	1	12/17/19	WB	30 - 130 % 3
% Nitrobenzene-d5	22		%	1	12/17/19	WB	30 - 130 % 3
% Phenol-d5	30		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/17/19	WB	30 - 130 %

3 = This parameter exceeds laboratory specified limits.  
Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level  
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **Semi-Volatile Comment:**

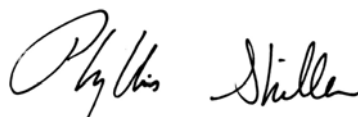
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

#### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87843

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 2 0-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	3.75	0.76	mg/Kg	1	12/17/19	EK	SW6010D
Barium	77.2	0.38	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	< 0.30	0.30	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	1.36	0.38	mg/Kg	1	12/18/19	TH	SW6010D
Chromium	12.6	0.38	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.21	0.07	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	9.11	0.38	mg/Kg	1	12/17/19	EK	SW6010D
Lead	421	0.38	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 3.8	3.8	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Lead	0.67	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.4	3.4	mg/Kg	1	12/17/19	EK	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	25.9	0.38	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	285	0.8	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	86		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	234	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	7.98	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	75	ug/Kg	2	12/17/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	85		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	78		%	2	12/17/19	SC	30 - 150 %
% TCMX	83		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	67		%	2	12/17/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	240	58	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	88		%	1	12/18/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	310	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	610	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	1900	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	300	270	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	4500	270	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	13000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	12000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	9600	2700	ug/Kg	10	12/17/19	WB	SW8270D
Benzo(ghi)perylene	5200	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	5300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	770	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	2400	380	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	12000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	1400	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	1200	270	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	28000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Fluorene	1700	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	5700	270	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	470	270	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	23000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	24000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	64		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	44		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	27		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	26		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	31		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	59		%	1	12/17/19	WB	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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3 = This parameter exceeds laboratory specified limits.  
Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level  
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **Semi-Volatile Comment:**

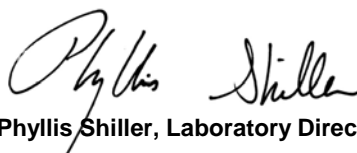
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

#### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87844

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 2 6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	1.10	0.71	mg/Kg	1	12/17/19	EK	SW6010D
Barium	14.3	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	< 0.28	0.28	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	< 0.36	0.36	mg/Kg	1	12/18/19	TH	SW6010D
Chromium	11.9	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	0.15	0.07	mg/Kg	5	12/16/19	RS	SW7471B
Nickel	10.5	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Lead	24.2	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/17/19	EK	SW6010D
Thallium	< 3.2	3.2	mg/Kg	1	12/17/19	EK	SW6010D
Vanadium	20.1	0.36	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	42.2	0.7	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	89		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	404	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	7.78	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/16/19	Q/Q	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	78		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	74		%	2	12/16/19	SC	30 - 150 %
% TCMX	70		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	66		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	66	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	78		%	1	12/18/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	800	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	820	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	670	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	550	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	610	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	740	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	760	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	1600	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	520	260	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	880	260	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	1400	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	60		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	40		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	33		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	31		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	35		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	65		%	1	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

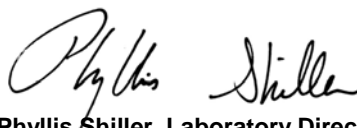
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

12/13/19

### Time

17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87845

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 3 0-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	1.26	0.77	mg/Kg	1	12/16/19	TH	SW6010D
Barium	34.2	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.31	0.31	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.39	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	12.0	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	8.13	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Lead	9.33	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	16.5	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	25.9	0.8	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	82		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	46	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	7.16	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/18/19	K/R/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	81	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	71		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	68		%	2	12/16/19	SC	30 - 150 %
% TCMX	64		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	62		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	74		%	1	12/18/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
1,2-Diphenylhydrazine	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dinitrophenol	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
2-Nitroaniline	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/18/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
4,6-Dinitro-2-methylphenol	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
4-Bromophenyl phenyl ether	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/18/19	AW	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Aniline	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Anthracene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benzidine	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Benzoic acid	ND	790	ug/Kg	1	12/18/19	AW	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-chloroethyl)ether	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Carbazole	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Chrysene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Di-n-butylphthalate	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Fluoranthene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Fluorene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Isophorone	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
N-Nitrosodimethylamine	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
N-Nitrosodiphenylamine	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Pentachloronitrobenzene	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Pentachlorophenol	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
Phenanthrene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Pyrene	ND	280	ug/Kg	1	12/18/19	AW	SW8270D
Pyridine	ND	400	ug/Kg	1	12/18/19	AW	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	84		%	1	12/18/19	AW	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/18/19	AW	30 - 130 %
% 2-Fluorophenol	54		%	1	12/18/19	AW	30 - 130 %
% Nitrobenzene-d5	59		%	1	12/18/19	AW	30 - 130 %
% Phenol-d5	58		%	1	12/18/19	AW	30 - 130 %
% Terphenyl-d14	60		%	1	12/18/19	AW	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

12/13/19

### Time

17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87846

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 3 6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.44	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	1.38	0.89	mg/Kg	1	12/16/19	TH	SW6010D
Barium	16.8	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.36	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.44	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	11.0	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	7.31	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Lead	6.87	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 4.4	4.4	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.8	1.8	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 4.0	4.0	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	16.6	0.44	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	18.6	0.9	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	73		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	69	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	7.23	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 7	7	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/18/19	K/R/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	90	ug/Kg	2	12/17/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	94		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	90		%	2	12/17/19	SC	30 - 150 %
% TCMX	89		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	81		%	2	12/17/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	68	mg/kg	1	12/18/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	68		%	1	12/18/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
1,2,4-Trichlorobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
1,2-Dichlorobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
1,2-Diphenylhydrazine	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
1,3-Dichlorobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
1,4-Dichlorobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2,4,5-Trichlorophenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2,4,6-Trichlorophenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dichlorophenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dimethylphenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dinitrophenol	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
2,4-Dinitrotoluene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2,6-Dinitrotoluene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2-Chloronaphthalene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2-Chlorophenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2-Methylnaphthalene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2-Methylphenol (o-cresol)	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
2-Nitroaniline	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
2-Nitrophenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
3,3'-Dichlorobenzidine	ND	320	ug/Kg	1	12/18/19	AW	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
4,6-Dinitro-2-methylphenol	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
4-Bromophenyl phenyl ether	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
4-Chloro-3-methylphenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
4-Chloroaniline	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
4-Chlorophenyl phenyl ether	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
4-Nitroaniline	ND	720	ug/Kg	1	12/18/19	AW	SW8270D
4-Nitrophenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Acenaphthene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Acenaphthylene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Acetophenone	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Aniline	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Anthracene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benz(a)anthracene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benzidine	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(a)pyrene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(b)fluoranthene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(ghi)perylene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benzo(k)fluoranthene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Benzoic acid	ND	900	ug/Kg	1	12/18/19	AW	SW8270D
Benzyl butyl phthalate	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-chloroethoxy)methane	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-chloroethyl)ether	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-chloroisopropyl)ether	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Bis(2-ethylhexyl)phthalate	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Carbazole	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Chrysene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Dibenz(a,h)anthracene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Dibenzofuran	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Diethyl phthalate	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Dimethylphthalate	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Di-n-butylphthalate	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Di-n-octylphthalate	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Fluoranthene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Fluorene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Hexachlorobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Hexachlorobutadiene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Hexachlorocyclopentadiene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Hexachloroethane	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Isophorone	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Naphthalene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Nitrobenzene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
N-Nitrosodimethylamine	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
N-Nitrosodi-n-propylamine	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
N-Nitrosodiphenylamine	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Pentachloronitrobenzene	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Pentachlorophenol	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
Phenanthrene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Pyrene	ND	320	ug/Kg	1	12/18/19	AW	SW8270D
Pyridine	ND	450	ug/Kg	1	12/18/19	AW	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	80		%	1	12/18/19	AW	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/18/19	AW	30 - 130 %
% 2-Fluorophenol	51		%	1	12/18/19	AW	30 - 130 %
% Nitrobenzene-d5	55		%	1	12/18/19	AW	30 - 130 %
% Phenol-d5	55		%	1	12/18/19	AW	30 - 130 %
% Terphenyl-d14	57		%	1	12/18/19	AW	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
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## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

12/13/19

### Time

17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87847

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 8 0-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	1.92	0.77	mg/Kg	1	12/16/19	TH	SW6010D
Barium	28.4	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.31	0.31	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.39	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	8.90	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	0.17	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	5.95	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Lead	34.4	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	15.7	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	21.6	0.8	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	84		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	105	5	umhos/cm	1	12/16/19	AP/MM	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	5.70	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	79	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	87		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	83		%	2	12/16/19	SC	30 - 150 %
% TCMX	78		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	75		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
Kerosene	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
Other Oil	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
Unidentified	ND	58	mg/kg	1	12/17/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	56		%	1	12/17/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	440	280	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	400	280	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	320	280	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	290	280	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	790	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	450	280	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	850	280	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	570	280	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	280	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	800	280	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	58		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	38		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	21		%	1	12/17/19	WB	30 - 130 % 3
% Nitrobenzene-d5	20		%	1	12/17/19	WB	30 - 130 % 3
% Phenol-d5	30		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	55		%	1	12/17/19	WB	30 - 130 %

3 = This parameter exceeds laboratory specified limits.  
Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **Semi-Volatile Comment:**

Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87848

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 8 6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	2.38	0.69	mg/Kg	1	12/16/19	TH	SW6010D
Barium	24.1	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.27	0.27	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.34	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	11.1	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	8.11	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Lead	65.5	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.1	3.1	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	21.5	0.34	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	40.2	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	89		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	97	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/16/19	KT	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/16/19	KT	SW846-Ignit
pH at 25C - Soil	6.23	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	76		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	73		%	2	12/16/19	SC	30 - 150 %
% TCMX	65		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	64		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Other Oil	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Unidentified	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	57		%	1	12/17/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	580	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	48		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	52		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	52		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	53		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	53		%	1	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87849

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 15 3-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	3.78	0.73	mg/Kg	1	12/16/19	TH	SW6010D
Barium	15.4	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	0.32	0.29	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.36	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	15.1	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	11.2	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Lead	5.11	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.3	3.3	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	29.2	0.36	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	27.9	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	87		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	208	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	8.12	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	76	ug/Kg	2	12/17/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	94		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	87		%	2	12/17/19	SC	30 - 150 %
% TCMX	82		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	73		%	2	12/17/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Other Oil	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
Unidentified	ND	56	mg/kg	1	12/17/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	57		%	1	12/17/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	61		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	62		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	58		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	56		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	60		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	61		%	1	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.


The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87850

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 15 6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	< 0.75	0.75	mg/Kg	1	12/16/19	TH	SW6010D
Barium	12.5	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.30	0.30	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.37	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	8.84	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	7.89	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Lead	3.80	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.4	3.4	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	13.1	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	17.9	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	89		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	775	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	7.72	1.00	pH Units	1	12/13/19 22:53	AP	SW846 9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	78		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	75		%	2	12/16/19	SC	30 - 150 %
% TCMX	66		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	64		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Other Oil	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
Unidentified	ND	55	mg/kg	1	12/17/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	55		%	1	12/17/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	50		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	51		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	48		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	47		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	48		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	52		%	1	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.


The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87851

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 15 0-3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	4.93	0.71	mg/Kg	1	12/16/19	TH	SW6010D
Barium	57.7	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	0.37	0.28	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	0.47	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	17.2	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	0.17	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	14.0	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Lead	306	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/16/19	TH	SW6010D
TCLP Lead	5.31	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.2	3.2	mg/Kg	1	12/16/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	28.5	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	125	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	84		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	239	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	7.61	1.00	pH Units	1	12/13/19 22:54	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	110	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	77	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	77	ug/Kg	2	12/16/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	136		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	136		%	2	12/16/19	SC	30 - 150 %
% TCMX	132		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	120		%	2	12/16/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	300	mg/kg	5	12/17/19	JRB	SW8015D DRO
Fuel Oil #4	ND	300	mg/kg	5	12/17/19	JRB	SW8015D DRO
Fuel Oil #6	ND	300	mg/kg	5	12/17/19	JRB	SW8015D DRO
Kerosene	ND	300	mg/kg	5	12/17/19	JRB	SW8015D DRO
Motor Oil	ND	300	mg/kg	5	12/17/19	JRB	SW8015D DRO
Other Oil	**	300	mg/kg	5	12/17/19	JRB	SW8015D DRO
Unidentified	480	300	mg/kg	5	12/17/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	117		%	5	12/17/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	620	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	1300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	4400	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	4000	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	3400	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	2300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	3000	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	780	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	490	390	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	4200	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	640	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	11000	2700	ug/Kg	10	12/17/19	WB	SW8270D
Fluorene	420	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	2600	270	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	5400	270	ug/Kg	1	12/17/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	7000	270	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	57		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	48		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	50		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	49		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/17/19	WB	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

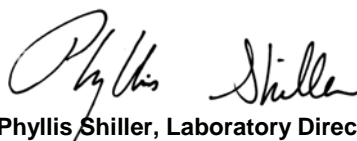
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### TPH Comment:

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C14 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

12/13/19

### Time

17:08

## Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87852

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 14 0-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	5.46	0.74	mg/Kg	1	12/16/19	TH	SW6010D
Barium	74.9	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	0.37	0.29	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	1.12	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	17.2	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	0.62	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	17.3	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Lead	192	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
TCLP Lead	0.26	0.10	mg/L	1	12/19/19	CPP	SW846 1311/6010
Thallium	< 3.3	3.3	mg/Kg	1	12/16/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	23.7	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	127	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	86		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	146	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	8.07	1.00	pH Units	1	12/13/19 22:54	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	290	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	76	ug/Kg	2	12/16/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	69		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	73		%	2	12/16/19	SC	30 - 150 %
% TCMX	68		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	67		%	2	12/16/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	190	58	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	66		%	1	12/18/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	610	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	380	270	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	1800	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	1900	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	1700	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	1300	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	1500	270	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	760	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	1900	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	330	270	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	3100	270	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1400	270	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	1500	270	ug/Kg	1	12/17/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	2900	270	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	41		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	40		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	29		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	34		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	36		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	42		%	1	12/17/19	WB	30 - 130 %

3 = This parameter exceeds laboratory specified limits.

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **Semi-Volatile Comment:**

Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

#### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87853

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 14 6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	2.04	0.74	mg/Kg	1	12/16/19	TH	SW6010D
Barium	30.1	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.30	0.30	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.37	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	12.7	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	0.04	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	9.89	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Lead	27.8	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.3	3.3	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	21.3	0.37	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	32.1	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	88		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	150	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	8.38	1.00	pH Units	1	12/13/19 22:54	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	98		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	90		%	2	12/16/19	SC	30 - 150 %
% TCMX	81		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	73		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	**	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	170	56	mg/kg	1	12/18/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	86		%	1	12/18/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	450	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	1600	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	3400	260	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	6600	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	5400	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	4400	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	2400	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	3600	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	750	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	1300	380	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	6000	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	750	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	930	260	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	18000	2600	ug/Kg	10	12/17/19	WB	SW8270D
Fluorene	1200	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	2800	260	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	530	260	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	18000	2600	ug/Kg	10	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	16000	2600	ug/Kg	10	12/17/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	58		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	55		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	47		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	48		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	49		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	52		%	1	12/17/19	WB	30 - 130 %
% 2,4,6-Tribromophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% 2-Fluorophenol (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Phenol-d5 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %
% Terphenyl-d14 (10x)	Diluted Out		%	10	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

### **TPH Comment:**

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87854

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 10 0-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	3.50	0.70	mg/Kg	1	12/16/19	TH	SW6010D
Barium	46.1	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	0.34	0.28	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.35	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	11.3	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	0.19	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	8.09	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Lead	120	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/16/19	TH	SW6010D
TCLP Lead	< 0.10	0.10	mg/L	1	12/19/19	TH	SW846 1311/6010
Thallium	< 3.2	3.2	mg/Kg	1	12/16/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	21.0	0.35	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	47.5	0.7	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	87		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	63	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	5.87	1.00	pH Units	1	12/13/19 22:54	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	76	ug/Kg	2	12/16/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	65		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	71		%	2	12/16/19	SC	30 - 150 %
% TCMX	64		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	65		%	2	12/16/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	78		%	1	12/18/19	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	12/17/19	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Benzoic acid	ND	760	ug/Kg	1	12/17/19	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Carbazole	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/17/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/17/19	WB	SW8270D
<b>QA/QC Surrogates</b>							
% 2,4,6-Tribromophenol	55		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorobiphenyl	57		%	1	12/17/19	WB	30 - 130 %
% 2-Fluorophenol	43		%	1	12/17/19	WB	30 - 130 %
% Nitrobenzene-d5	47		%	1	12/17/19	WB	30 - 130 %
% Phenol-d5	50		%	1	12/17/19	WB	30 - 130 %
% Terphenyl-d14	57		%	1	12/17/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

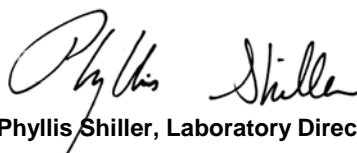
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#:

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date Time

12/13/19  
12/13/19 17:08

### Laboratory Data

SDG ID: GCE87838  
Phoenix ID: CE87855

Project ID: 515 SOMERVILLE AVE.  
Client ID: LOC 10 6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Arsenic	1.32	0.77	mg/Kg	1	12/16/19	TH	SW6010D
Barium	20.2	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Beryllium	< 0.31	0.31	mg/Kg	1	12/16/19	TH	SW6010D
Cadmium	< 0.39	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Chromium	10.1	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	9.36	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Lead	17.1	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	12/16/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/16/19	TH	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	12/16/19	TH	SW6010D
Vanadium	15.6	0.39	mg/Kg	1	12/16/19	TH	SW6010D
Zinc	28.4	0.8	mg/Kg	1	12/16/19	TH	SW6010D
Percent Solid	85		%		12/13/19	JS	SW846-%Solid
Conductivity - Soil Matrix	40	5	umhos/cm	1	12/13/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/13/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/17/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/17/19	BJA	SW846-Ignit
pH at 25C - Soil	6.44	1.00	pH Units	1	12/13/19 22:54	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/17/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/17/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/17/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/13/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/16/19	GK/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Extraction of TPH SM	Completed				12/16/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Polychlorinated Biphenyls</u></b>							
PCB-1016	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1221	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1232	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1242	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1248	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1254	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1260	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1262	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
PCB-1268	ND	76	ug/Kg	2	12/16/19	SC	SW8082A
<b><u>QA/QC Surrogates</u></b>							
% DCBP	73		%	2	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	77		%	2	12/16/19	SC	30 - 150 %
% TCMX	71		%	2	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	72		%	2	12/16/19	SC	30 - 150 %
<b><u>TPH by GC (Extractable (C9-C36))</u></b>							
Fuel Oil #2 / Diesel Fuel	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	58	mg/kg	1	12/18/19	JRB	SW8015D DRO
<b><u>QA/QC Surrogates</u></b>							
% n-Pentacosane	75		%	1	12/18/19	JRB	50 - 150 %
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/16/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
4-Nitroaniline	ND	620	ug/Kg	1	12/16/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Benzoic acid	ND	780	ug/Kg	1	12/16/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/16/19	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/16/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	57		%	1	12/16/19	WB	30 - 130 %
% 2-Fluorobiphenyl	55		%	1	12/16/19	WB	30 - 130 %
% 2-Fluorophenol	50		%	1	12/16/19	WB	30 - 130 %
% Nitrobenzene-d5	50		%	1	12/16/19	WB	30 - 130 %
% Phenol-d5	55		%	1	12/16/19	WB	30 - 130 %
% Terphenyl-d14	59		%	1	12/16/19	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



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## QA/QC Report

December 24, 2019

### QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510372 (mg/kg), QC Sample No: CE87173 2X (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844)													
Mercury - Soil	BRL	0.02	0.09	0.07	NC	100	104	3.9				75 - 125	20

Comment:

This batch consists of a Blank, LCS, LCSD and sample Duplicate.

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 510577 (mg/kg), QC Sample No: CE87845 2X (CE87845, CE87846, CE87847, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854)

Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	85.4	99.6	15.4	99.2	94.7	4.6	75 - 125	20
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 510578 (mg/kg), QC Sample No: CE88403 2X (CE87855)

Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	101	107	5.8	90.5	85.7	5.4	75 - 125	20
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 510969 (mg/L), QC Sample No: CE82479 (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87851, CE87852)

### ICP Metals - TCLP Extraction

Barium	BRL	0.10	0.34	0.39	NC	101	102	1.0	111			75 - 125	20
Chromium	BRL	0.10	<0.10	<0.10	NC	103	104	1.0	111			75 - 125	20
Lead	BRL	0.10	0.15	0.15	NC	98.1	99.1	1.0	106			75 - 125	20

QA/QC Batch 510275 (mg/kg), QC Sample No: CE87504 (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844)

### ICP Metals - Soil

Antimony	BRL	3.3	<3.6	<3.6	NC	91.3	93.7	2.6	93.5			75 - 125	30
Arsenic	BRL	0.67	10.0	8.00	22.2	96.7	103	6.3	96.1			75 - 125	30
Barium	BRL	0.33	88.3	90.3	2.20	89.1	86.1	3.4	105			75 - 125	30
Beryllium	BRL	0.27	0.62	0.67	NC	99.9	99.1	0.8	104			75 - 125	30
Cadmium	BRL	0.33	0.37	0.37	NC	97.2	83.2	15.5	103			75 - 125	30
Chromium	BRL	0.33	25.2	25.5	1.20	102	110	7.5	103			75 - 125	30
Lead	BRL	0.33	31.8	29.8	6.50	95.0	102	7.1	99.1			75 - 125	30
Nickel	BRL	0.33	14.8	15.9	7.20	100	100	0.0	102			75 - 125	30
Selenium	BRL	1.3	<1.4	<1.5	NC	82.4	85.1	3.2	81.4			75 - 125	30
Silver	BRL	0.33	<0.36	<0.36	NC	94.3	103	8.8	99.2			75 - 125	30
Thallium	BRL	3.0	<3.2	<3.3	NC	106	104	1.9	100			75 - 125	30
Vanadium	BRL	0.33	32.0	36.2	12.3	102	109	6.6	104			75 - 125	30
Zinc	BRL	0.67	51.9	52.3	0.80	95.8	100	4.3	100			75 - 125	30

QA/QC Batch 510281 (mg/kg), QC Sample No: CE87845 (CE87845, CE87846, CE87847, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)

### ICP Metals - Soil

Antimony	BRL	3.3	<3.9	<3.9	NC	87.7	105	18.0	97.4			75 - 125	30
Arsenic	BRL	0.67	1.26	1.23	NC	88.6	101	13.1	92.7			75 - 125	30



## QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Barium	BRL	0.33	34.2	28.8	17.1	76.8	91.2	17.1	95.8			75 - 125	30
Beryllium	BRL	0.27	<0.31	<0.31	NC	88.1	103	15.6	100			75 - 125	30
Cadmium	BRL	0.33	<0.39	<0.39	NC	71.0	88.4	21.8	95.9			75 - 125	30
Chromium	BRL	0.33	12.0	11.4	5.10	91.6	110	18.3	101			75 - 125	30
Lead	BRL	0.33	9.33	6.43	36.8	88.6	100	12.1	94.8			75 - 125	30
Nickel	BRL	0.33	8.13	7.73	5.00	88.9	102	13.7	98.0			75 - 125	30
Selenium	BRL	1.3	<1.5	<1.6	NC	93.5	84.3	10.3	78.9			75 - 125	30
Silver	BRL	0.33	<0.39	<0.39	NC	91.5	108	16.5	101			75 - 125	30
Thallium	BRL	3.0	<3.5	<3.5	NC	93.4	106	12.6	98.5			75 - 125	30
Vanadium	BRL	0.33	16.5	15.4	6.90	94.3	111	16.3	103			75 - 125	30
Zinc	BRL	0.67	25.9	23.4	10.1	89.0	102	13.6	96.0			75 - 125	30

QA/QC Batch 510970 (mg/L), QC Sample No: CE90409 (CE87854)

### ICP Metals - TCLP Extraction

Lead	BRL	0.010	0.248	0.250	0.80	106	106	0.0	102			75 - 125	20
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l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.



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## QA/QC Report

December 24, 2019

### QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCS %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510380 (mg/Kg), QC Sample No: CE87372 4.9X (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844, CE87845, CE87846, CE87847, CE87848)													
Reactivity Cyanide	BRL	0.05	<6	<5.8	NC	95.3						80 - 120	20
Reactivity Sulfide	BRL	20	<20	<20	NC	96.0						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 510392 (mg/Kg), QC Sample No: CE87849 4.9X (CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)													
Reactivity Cyanide	BRL	0.05	<6	<5.7	NC	95.1						80 - 120	20
Reactivity Sulfide	BRL	20	<20	<20	NC	96.0						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 510306 (PH), QC Sample No: CE86816 (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844, CE87845)													
pH at 25C - Soil			7.17	7.20	0.40	101						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510305 (umhos/cm), QC Sample No: CE87372 (CE87838, CE87839, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)													
Conductivity - Soil Matrix	BRL	5	317	321	1.30	96.0						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510500 (umhos/cm), QC Sample No: CE87840 (CE87840, CE87841, CE87842, CE87843, CE87844, CE87845, CE87846, CE87847)													
Conductivity - Soil Matrix	BRL	5	166	166	0	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510447 (Degree F), QC Sample No: CE87844 (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510307 (PH), QC Sample No: CE87846 (CE87846, CE87847, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)													
pH at 25C - Soil			7.23	7.22	0.10	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510448 (Degree F), QC Sample No: CE87848 (CE87845, CE87846, CE87847, CE87848)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													

QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510640 (Degree F), QC Sample No: CE88095 (CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)													
Flash Point			>200	>200	NC	103						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													



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## QA/QC Report

December 24, 2019

### QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 510473 (mg/Kg), QC Sample No: CE85290 (CE87851, CE87852, CE87853, CE87854, CE87855)

#### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	87	89	2.3	78	79	1.3	50 - 150	30
% n-Pentacosane	71	%	68	69	1.5	53	52	1.9	50 - 150	30

Comment:

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 510336 (mg/Kg), QC Sample No: CE88007 (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844, CE87845, CE87846, CE87847, CE87848, CE87849, CE87850)

#### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	106			61	80	27.0	50 - 150	30
% n-Pentacosane	37	%	98			56	77	31.6	50 - 150	30 r,s

Comment:

This Batch consists of a Blank, LCS, MS and MSD

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 510268 (ug/Kg), QC Sample No: CE87838 2X (CE87838, CE87839, CE87840, CE87841, CE87842, CE87843, CE87844, CE87845, CE87846, CE87847, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)

#### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	68	74	8.5	69	72	4.3	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	71	74	4.1	87	80	8.4	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	76	%	82	87	5.9	76	81	6.4	30 - 150	30
% DCBP (Surrogate Rec) (Confirm	80	%	87	93	6.7	78	84	7.4	30 - 150	30
% TCMX (Surrogate Rec)	72	%	72	77	6.7	71	74	4.1	30 - 150	30
% TCMX (Surrogate Rec) (Confirm	71	%	77	81	5.1	74	77	4.0	30 - 150	30

QA/QC Batch 510341 (ug/kg), QC Sample No: CE87855 (CE87838, CE87840, CE87842, CE87843, CE87844, CE87847, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855)

#### Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	67	62	7.8	53	59	10.7	40 - 140	30
1,2,4-Trichlorobenzene	ND	230	63	64	1.6	49	53	7.8	40 - 140	30
1,2-Dichlorobenzene	ND	180	54	50	7.7	41	41	0.0	40 - 140	30
1,2-Diphenylhydrazine	ND	230	61	65	6.3	60	65	8.0	40 - 140	30
1,3-Dichlorobenzene	ND	230	54	49	9.7	35	34	2.9	40 - 140	30 m
1,4-Dichlorobenzene	ND	230	53	52	1.9	39	37	5.3	40 - 140	30 m
2,4,5-Trichlorophenol	ND	230	63	73	14.7	71	76	6.8	30 - 130	30
2,4,6-Trichlorophenol	ND	130	62	64	3.2	63	68	7.6	30 - 130	30

## QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2,4-Dichlorophenol	ND	130	65	64	1.6	63	67	6.2	30 - 130	30	
2,4-Dimethylphenol	ND	230	64	69	7.5	60	68	12.5	30 - 130	30	
2,4-Dinitrophenol	ND	230	33	35	5.9	<10	15	NC	30 - 130	30	m
2,4-Dinitrotoluene	ND	130	64	69	7.5	69	69	0.0	40 - 140	30	
2,6-Dinitrotoluene	ND	130	66	69	4.4	67	69	2.9	40 - 140	30	
2-Chloronaphthalene	ND	230	60	63	4.9	56	64	13.3	40 - 140	30	
2-Chlorophenol	ND	230	60	60	0.0	56	62	10.2	30 - 130	30	
2-Methylnaphthalene	ND	230	61	60	1.7	54	60	10.5	40 - 140	30	
2-Methylphenol (o-cresol)	ND	230	68	65	4.5	58	71	20.2	30 - 130	30	
2-Nitroaniline	ND	330	97	105	7.9	109	116	6.2	40 - 140	30	
2-Nitrophenol	ND	230	67	58	14.4	58	65	11.4	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	62	64	3.2	59	67	12.7	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	65	73	11.6	79	87	9.6	40 - 140	30	
3-Nitroaniline	ND	330	74	73	1.4	80	86	7.2	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	51	49	4.0	38	43	12.3	30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	66	68	3.0	67	71	5.8	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	65	64	1.6	67	71	5.8	30 - 130	30	
4-Chloroaniline	ND	230	57	57	0.0	62	63	1.6	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	230	61	65	6.3	60	64	6.5	40 - 140	30	
4-Nitroaniline	ND	230	64	66	3.1	62	68	9.2	40 - 140	30	
4-Nitrophenol	ND	230	56	59	5.2	57	60	5.1	30 - 130	30	
Acenaphthene	ND	230	62	66	6.3	61	64	4.8	40 - 140	30	
Acenaphthylene	ND	130	59	64	8.1	58	64	9.8	40 - 140	30	
Acetophenone	ND	230	55	54	1.8	49	58	16.8	40 - 140	30	
Aniline	ND	330	45	40	11.8	48	57	17.1	40 - 140	30	
Anthracene	ND	230	61	64	4.8	64	70	9.0	40 - 140	30	
Benz(a)anthracene	ND	230	65	68	4.5	66	72	8.7	40 - 140	30	
Benzidine	ND	330	23	23	0.0	70	76	8.2	40 - 140	30	I
Benzo(a)pyrene	ND	130	65	68	4.5	69	71	2.9	40 - 140	30	
Benzo(b)fluoranthene	ND	160	60	63	4.9	63	67	6.2	40 - 140	30	
Benzo(ghi)perylene	ND	230	60	63	4.9	67	68	1.5	40 - 140	30	
Benzo(k)fluoranthene	ND	230	63	65	3.1	66	68	3.0	40 - 140	30	
Benzoic Acid	ND	330	14	20	35.3	<10	13	NC	30 - 130	30	I,m,r
Benzyl butyl phthalate	ND	230	65	70	7.4	63	69	9.1	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	62	60	3.3	58	65	11.4	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	50	48	4.1	44	48	8.7	40 - 140	30	
Bis(2-chloroisopropyl)ether	ND	230	51	45	12.5	41	46	11.5	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	69	68	1.5	66	69	4.4	40 - 140	30	
Carbazole	ND	230	60	65	8.0	66	69	4.4	40 - 140	30	
Chrysene	ND	230	63	64	1.6	63	68	7.6	40 - 140	30	
Dibenz(a,h)anthracene	ND	130	69	72	4.3	74	76	2.7	40 - 140	30	
Dibenzofuran	ND	230	60	63	4.9	58	65	11.4	40 - 140	30	
Diethyl phthalate	ND	230	61	66	7.9	62	67	7.8	40 - 140	30	
Dimethylphthalate	ND	230	64	67	4.6	64	69	7.5	40 - 140	30	
Di-n-butylphthalate	ND	670	64	66	3.1	67	71	5.8	40 - 140	30	
Di-n-octylphthalate	ND	230	67	69	2.9	66	70	5.9	40 - 140	30	
Fluoranthene	ND	230	61	65	6.3	65	69	6.0	40 - 140	30	
Fluorene	ND	230	62	66	6.3	62	67	7.8	40 - 140	30	
Hexachlorobenzene	ND	130	58	58	0.0	61	57	6.8	40 - 140	30	
Hexachlorobutadiene	ND	230	64	58	9.8	45	42	6.9	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	48	41	15.7	32	35	9.0	40 - 140	30	m
Hexachloroethane	ND	130	52	48	8.0	32	30	6.5	40 - 140	30	m
Indeno(1,2,3-cd)pyrene	ND	230	66	70	5.9	69	73	5.6	40 - 140	30	

## QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Isophorone	ND	130	55	55	0.0	50	57	13.1	40 - 140	30
Naphthalene	ND	230	60	57	5.1	52	56	7.4	40 - 140	30
Nitrobenzene	ND	130	55	53	3.7	52	59	12.6	40 - 140	30
N-Nitrosodimethylamine	ND	230	45	47	4.3	43	42	2.4	40 - 140	30
N-Nitrosodi-n-propylamine	ND	130	57	57	0.0	55	60	8.7	40 - 140	30
N-Nitrosodiphenylamine	ND	130	72	77	6.7	71	79	10.7	40 - 140	30
Pentachloronitrobenzene	ND	230	60	64	6.5	64	66	3.1	40 - 140	30
Pentachlorophenol	ND	230	35	41	15.8	43	56	26.3	30 - 130	30
Phenanthrene	ND	130	59	63	6.6	61	64	4.8	40 - 140	30
Phenol	ND	230	59	59	0.0	57	65	13.1	30 - 130	30
Pyrene	ND	230	64	66	3.1	64	71	10.4	40 - 140	30
Pyridine	ND	230	31	28	10.2	32	32	0.0	40 - 140	30
% 2,4,6-Tribromophenol	26	%	55	56	1.8	57	59	3.4	30 - 130	30
% 2-Fluorobiphenyl	48	%	58	62	6.7	50	58	14.8	30 - 130	30
% 2-Fluorophenol	42	%	55	51	7.5	49	58	16.8	30 - 130	30
% Nitrobenzene-d5	43	%	54	52	3.8	51	57	11.1	30 - 130	30
% Phenol-d5	44	%	57	57	0.0	50	58	14.8	30 - 130	30
% Terphenyl-d14	48	%	56	59	5.2	56	60	6.9	30 - 130	30

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 510846 (ug/kg), QC Sample No: CE89997 (CE87839, CE87841, CE87845, CE87846)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	54	58	7.1	55	46	17.8	40 - 140	30
1,2,4-Trichlorobenzene	ND	230	51	58	12.8	54	46	16.0	40 - 140	30
1,2-Dichlorobenzene	ND	180	42	51	19.4	50	41	19.8	40 - 140	30
1,2-Diphenylhydrazine	ND	230	56	59	5.2	54	44	20.4	40 - 140	30
1,3-Dichlorobenzene	ND	230	41	48	15.7	47	40	16.1	40 - 140	30
1,4-Dichlorobenzene	ND	230	43	50	15.1	51	40	24.2	40 - 140	30
2,4,5-Trichlorophenol	ND	230	60	67	11.0	59	48	20.6	30 - 130	30
2,4,6-Trichlorophenol	ND	130	61	67	9.4	59	48	20.6	30 - 130	30
2,4-Dichlorophenol	ND	130	57	65	13.1	58	45	25.2	30 - 130	30
2,4-Dimethylphenol	ND	230	60	67	11.0	54	42	25.0	30 - 130	30
2,4-Dinitrophenol	ND	230	20	20	0.0	33	21	44.4	30 - 130	30
2,4-Dinitrotoluene	ND	130	67	71	5.8	63	52	19.1	40 - 140	30
2,6-Dinitrotoluene	ND	130	68	71	4.3	63	52	19.1	40 - 140	30
2-Chloronaphthalene	ND	230	56	62	10.2	56	45	21.8	40 - 140	30
2-Chlorophenol	ND	230	51	61	17.9	54	45	18.2	30 - 130	30
2-Methylnaphthalene	ND	230	50	56	11.3	52	43	18.9	40 - 140	30
2-Methylphenol (o-cresol)	ND	230	54	64	16.9	53	44	18.6	30 - 130	30
2-Nitroaniline	ND	330	96	100	4.1	95	79	18.4	40 - 140	30
2-Nitrophenol	ND	230	63	78	21.3	64	55	15.1	30 - 130	30
3&4-Methylphenol (m&p-cresol)	ND	230	53	63	17.2	53	42	23.2	30 - 130	30
3,3'-Dichlorobenzidine	ND	130	67	75	11.3	62	53	15.7	40 - 140	30
3-Nitroaniline	ND	330	67	69	2.9	68	57	17.6	40 - 140	30
4,6-Dinitro-2-methylphenol	ND	230	42	43	2.4	52	40	26.1	30 - 130	30
4-Bromophenyl phenyl ether	ND	230	66	69	4.4	62	50	21.4	40 - 140	30
4-Chloro-3-methylphenol	ND	230	63	66	4.7	60	50	18.2	30 - 130	30
4-Chloroaniline	ND	230	48	54	11.8	57	45	23.5	40 - 140	30
4-Chlorophenyl phenyl ether	ND	230	61	65	6.3	57	48	17.1	40 - 140	30
4-Nitroaniline	ND	230	63	73	14.7	63	50	23.0	40 - 140	30
4-Nitrophenol	ND	230	66	70	5.9	64	51	22.6	30 - 130	30

## QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Acenaphthene	ND	230	56	63	11.8	56	46	19.6	40 - 140	30	
Acenaphthylene	ND	130	56	62	10.2	55	45	20.0	40 - 140	30	
Acetophenone	ND	230	47	55	15.7	50	41	19.8	40 - 140	30	
Aniline	ND	330	34	42	21.1	44	32	31.6	40 - 140	30	I,m,r
Anthracene	ND	230	60	64	6.5	58	46	23.1	40 - 140	30	
Benz(a)anthracene	ND	230	65	68	4.5	63	52	19.1	40 - 140	30	
Benzidine	ND	330	29	31	6.7	11	<10	NC	40 - 140	30	I,m
Benzo(a)pyrene	ND	130	67	70	4.4	65	53	20.3	40 - 140	30	
Benzo(b)fluoranthene	ND	160	61	68	10.9	59	50	16.5	40 - 140	30	
Benzo(ghi)perylene	ND	230	60	64	6.5	61	46	28.0	40 - 140	30	
Benzo(k)fluoranthene	ND	230	63	64	1.6	61	47	25.9	40 - 140	30	
Benzoic Acid	ND	330	<10	<10	NC	32	15	72.3	30 - 130	30	I,m,r
Benzyl butyl phthalate	ND	230	69	73	5.6	67	52	25.2	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	49	54	9.7	48	40	18.2	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	37	46	21.7	43	35	20.5	40 - 140	30	I,m
Bis(2-chloroisopropyl)ether	ND	230	37	44	17.3	42	34	21.1	40 - 140	30	I,m
Bis(2-ethylhexyl)phthalate	ND	230	67	70	4.4	60	50	18.2	40 - 140	30	
Carbazole	ND	230	61	64	4.8	58	47	21.0	40 - 140	30	
Chrysene	ND	230	62	67	7.8	60	50	18.2	40 - 140	30	
Dibenz(a,h)anthracene	ND	130	67	72	7.2	66	52	23.7	40 - 140	30	
Dibenzofuran	ND	230	57	62	8.4	56	46	19.6	40 - 140	30	
Diethyl phthalate	ND	230	63	66	4.7	60	48	22.2	40 - 140	30	
Dimethylphthalate	ND	230	61	64	4.8	58	48	18.9	40 - 140	30	
Di-n-butylphthalate	ND	670	66	69	4.4	63	50	23.0	40 - 140	30	
Di-n-octylphthalate	ND	230	73	76	4.0	67	55	19.7	40 - 140	30	
Fluoranthene	ND	230	62	63	1.6	59	48	20.6	40 - 140	30	
Fluorene	ND	230	59	62	5.0	58	47	21.0	40 - 140	30	
Hexachlorobenzene	ND	130	64	70	9.0	63	50	23.0	40 - 140	30	
Hexachlorobutadiene	ND	230	52	59	12.6	58	47	21.0	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	51	58	12.8	52	41	23.7	40 - 140	30	
Hexachloroethane	ND	130	41	51	21.7	49	40	20.2	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	70	73	4.2	68	53	24.8	40 - 140	30	
Isophorone	ND	130	46	51	10.3	46	39	16.5	40 - 140	30	m
Naphthalene	ND	230	48	54	11.8	51	42	19.4	40 - 140	30	
Nitrobenzene	ND	130	47	57	19.2	53	42	23.2	40 - 140	30	
N-Nitrosodimethylamine	ND	230	29	33	12.9	33	26	23.7	40 - 140	30	I,m
N-Nitrosodi-n-propylamine	ND	130	47	53	12.0	49	41	17.8	40 - 140	30	
N-Nitrosodiphenylamine	ND	130	68	71	4.3	62	51	19.5	40 - 140	30	
Pentachloronitrobenzene	ND	230	77	80	3.8	72	56	25.0	40 - 140	30	
Pentachlorophenol	ND	230	46	45	2.2	51	38	29.2	30 - 130	30	
Phenanthrene	ND	130	59	63	6.6	56	47	17.5	40 - 140	30	
Phenol	ND	230	52	61	15.9	55	45	20.0	30 - 130	30	
Pyrene	ND	230	63	64	1.6	59	50	16.5	40 - 140	30	
Pyridine	ND	230	20	22	9.5	27	21	25.0	40 - 140	30	I,m
% 2,4,6-Tribromophenol	42	%	72	76	5.4	66	53	21.8	30 - 130	30	
% 2-Fluorobiphenyl	54	%	54	57	5.4	52	42	21.3	30 - 130	30	
% 2-Fluorophenol	50	%	43	52	18.9	46	37	21.7	30 - 130	30	
% Nitrobenzene-d5	54	%	46	54	16.0	48	40	18.2	30 - 130	30	
% Phenol-d5	53	%	47	55	15.7	49	39	22.7	30 - 130	30	
% Terphenyl-d14	51	%	55	55	0.0	50	40	22.2	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

## QA/QC Data

SDG I.D.: GCE87838

Parameter	Blank	Blk	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	%	%
		RL							Rec Limits	RPD Limits

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.

s = This parameter is outside laboratory Blank Surrogate specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director

December 24, 2019



Tuesday, December 24, 2019

Criteria: MA: S1, S1G2, S1G3

State: MA

## Sample Criteria Exceedances Report

### GCE87838 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE87838	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2300	250	2000	2000	ug/Kg
CE87838	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2300	250	2000	2000	ug/Kg
CE87838	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	2300	250	2000	2000	ug/Kg
CE87838	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	2300	250	2000	2000	ug/Kg
CE87838	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	280	0.36	200	200	mg/Kg
CE87838	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	280	0.36	200	200	mg/Kg
CE87838	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	280	0.36	200	200	mg/Kg
CE87838	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	280	0.36	200	200	mg/Kg
CE87839	BA-SM	Barium	MA / CMR 310.40.1600 / S1 (mg/kg)	2290	37	1000	1000	mg/Kg
CE87839	BA-SM	Barium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2290	37	1000	1000	mg/Kg
CE87839	BA-SM	Barium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	2290	37	1000	1000	mg/Kg
CE87839	BA-SM	Barium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	2290	37	1000	1000	mg/Kg
CE87839	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	311	0.37	200	200	mg/Kg
CE87839	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	311	0.37	200	200	mg/Kg
CE87839	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	311	0.37	200	200	mg/Kg
CE87839	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	311	0.37	200	200	mg/Kg
CE87840	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	6300	270	2000	2000	ug/Kg
CE87840	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	7300	270	7000	7000	ug/Kg
CE87840	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	920	270	700	700	ug/Kg
CE87840	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	920	270	700	700	ug/Kg
CE87840	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	6300	270	2000	2000	ug/Kg
CE87840	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	7300	270	7000	7000	ug/Kg
CE87840	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	6300	270	2000	2000	ug/Kg
CE87840	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	920	270	700	700	ug/Kg
CE87840	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	7300	270	7000	7000	ug/Kg
CE87840	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	6300	270	2000	2000	ug/Kg
CE87840	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	920	270	700	700	ug/Kg
CE87840	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	7300	270	7000	7000	ug/Kg
CE87840	CR-SM	Chromium	MA / CMR 310.40.1600 / S1 (mg/kg)	111	0.37	100	100	mg/Kg
CE87840	CR-SM	Chromium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	111	0.37	100	100	mg/Kg
CE87840	CR-SM	Chromium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	111	0.37	100	100	mg/Kg
CE87840	CR-SM	Chromium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	111	0.37	100	100	mg/Kg
CE87840	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	1770	37	200	200	mg/Kg
CE87840	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1770	37	200	200	mg/Kg
CE87840	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1770	37	200	200	mg/Kg
CE87840	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1770	37	200	200	mg/Kg
CE87840	SB-SM	Antimony	MA / CMR 310.40.1600 / S1 (mg/kg)	98.3	3.7	20	20	mg/Kg
CE87840	SB-SM	Antimony	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	98.3	3.7	20	20	mg/Kg
CE87840	SB-SM	Antimony	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	98.3	3.7	20	20	mg/Kg
CE87840	SB-SM	Antimony	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	98.3	3.7	20	20	mg/Kg

Tuesday, December 24, 2019

Criteria: MA: S1, S1G2, S1G3

State: MA

## Sample Criteria Exceedances Report

GCE87838 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE87840	ZN-SM	Zinc	MA / CMR 310.40.1600 / S1 (mg/kg)	1970	74	1000	1000	mg/Kg
CE87840	ZN-SM	Zinc	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1970	74	1000	1000	mg/Kg
CE87840	ZN-SM	Zinc	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1970	74	1000	1000	mg/Kg
CE87840	ZN-SM	Zinc	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1970	74	1000	1000	mg/Kg
CE87841	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2200	280	2000	2000	ug/Kg
CE87841	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2200	280	2000	2000	ug/Kg
CE87841	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	2200	280	2000	2000	ug/Kg
CE87841	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	2200	280	2000	2000	ug/Kg
CE87841	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	293	0.40	200	200	mg/Kg
CE87841	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	293	0.40	200	200	mg/Kg
CE87841	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	293	0.40	200	200	mg/Kg
CE87841	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	293	0.40	200	200	mg/Kg
CE87842	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	2100	520	2000	2000	ug/Kg
CE87842	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	2100	520	2000	2000	ug/Kg
CE87842	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	2100	520	2000	2000	ug/Kg
CE87842	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	2100	520	2000	2000	ug/Kg
CE87842	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	429	0.43	200	200	mg/Kg
CE87842	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	429	0.43	200	200	mg/Kg
CE87842	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	429	0.43	200	200	mg/Kg
CE87842	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	429	0.43	200	200	mg/Kg
CE87843	\$8270-SMR	Benzo(b)fluoranthene	MA / CMR 310.40.1600 / S1 (mg/kg)	9600	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	12000	2700	2000	2000	ug/Kg
CE87843	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	1400	270	700	700	ug/Kg
CE87843	\$8270-SMR	Benz(a)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	13000	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Phenanthrene	MA / CMR 310.40.1600 / S1 (mg/kg)	23000	2700	10000	10000	ug/Kg
CE87843	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	12000	2700	2000	2000	ug/Kg
CE87843	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	1400	270	700	700	ug/Kg
CE87843	\$8270-SMR	Phenanthrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	23000	2700	10000	10000	ug/Kg
CE87843	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	9600	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	13000	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1400	270	700	700	ug/Kg
CE87843	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	9600	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	12000	2700	2000	2000	ug/Kg
CE87843	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	13000	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	12000	2700	2000	2000	ug/Kg
CE87843	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	13000	2700	7000	7000	ug/Kg
CE87843	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1400	270	700	700	ug/Kg
CE87843	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	9600	2700	7000	7000	ug/Kg
CE87843	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	421	0.38	200	200	mg/Kg
CE87843	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	421	0.38	200	200	mg/Kg

Tuesday, December 24, 2019

Criteria: MA: S1, S1G2, S1G3

State: MA

## Sample Criteria Exceedances Report

GCE87838 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE87843	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	421	0.38	200	200	mg/Kg
CE87843	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	421	0.38	200	200	mg/Kg
CE87851	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	4000	270	2000	2000	ug/Kg
CE87851	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	4000	270	2000	2000	ug/Kg
CE87851	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	4000	270	2000	2000	ug/Kg
CE87851	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	4000	270	2000	2000	ug/Kg
CE87851	PB-SM	Lead	MA / CMR 310.40.1600 / S1 (mg/kg)	306	0.35	200	200	mg/Kg
CE87851	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	306	0.35	200	200	mg/Kg
CE87851	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	306	0.35	200	200	mg/Kg
CE87851	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	306	0.35	200	200	mg/Kg
CE87851	TCLP-PB	TCLP Lead	EPA / 40 CFR 261.24 / Toxicity Characteristics	5.31	0.10	5	5	mg/L
CE87853	\$8270-SMR	Benzo(a)pyrene	MA / CMR 310.40.1600 / S1 (mg/kg)	5400	260	2000	2000	ug/Kg
CE87853	\$8270-SMR	Dibenz(a,h)anthracene	MA / CMR 310.40.1600 / S1 (mg/kg)	750	260	700	700	ug/Kg
CE87853	\$8270-SMR	Phenanthrene	MA / CMR 310.40.1600 / S1 (mg/kg)	18000	2600	10000	10000	ug/Kg
CE87853	\$8270-SMR	Phenanthrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	18000	2600	10000	10000	ug/Kg
CE87853	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	5400	260	2000	2000	ug/Kg
CE87853	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	750	260	700	700	ug/Kg
CE87853	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	5400	260	2000	2000	ug/Kg
CE87853	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	750	260	700	700	ug/Kg
CE87853	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	5400	260	2000	2000	ug/Kg
CE87853	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	750	260	700	700	ug/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

December 24, 2019

SDG I.D.: GCE87838

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

### **SVOA Narration**

**CHEM07 12/16/19-2:** CE87838, CE87840, CE87842, CE87843, CE87844, CE87847, CE87848, CE87849, CE87850, CE87851, CE87852, CE87853, CE87854, CE87855

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Continuing Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.098 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

**CHEM28 12/18/19-1:** CE87845, CE87846

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.065 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.082 (0.1), Bis(2-chloroethoxy)methane 0.261 (0.3)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

**CHEM29 12/19/19-1:** CE87839, CE87841

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.061 (0.1), Hexachlorobenzene 0.085 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.074 (0.1), Hexachlorobenzene 0.093 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.





## Sarah Bell

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**From:** [mberger@cleanproperties.com](mailto:mberger@cleanproperties.com)  
**Sent:** Tuesday, December 17, 2019 8:14 PM  
**To:** Sarah Bell  
**Subject:** RE: Do you want me to add TCLP Lead or anything above 20x GCE87838

Dear Sarah,

Good point; thank you, yes please add TCLP when there's a 20x rule exceedance.

Sincerely,

Marcia

Marcia J. Berger, P.E., L.S.P.  
President  
CLEAN PROPERTIES, INC.  
111 Boston Post Road, Suite 214  
Sudbury, MA 01776  
Tel: (617)848-1200 direct // (800) 977-1982 office

----- Original Message -----

Subject: Do you want me to add TCLP Lead or anything above 20x GCE87838  
From: "Sarah Bell" <[sarah@phoenixlabs.com](mailto:sarah@phoenixlabs.com)>  
Date: 12/17/19 10:23 am  
To: "[mberger@cleanproperties.com](mailto:mberger@cleanproperties.com)" <[mberger@cleanproperties.com](mailto:mberger@cleanproperties.com)>



Tuesday, December 24, 2019

Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
SDG ID: GCE88391  
Sample ID#s: CE88391 - CE88412

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
UT Lab Registration #CT00007  
VT Lab Registration #VT11301





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## SDG Comments

December 24, 2019

SDG I.D.: GCE88391

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### CE88393 Volatile Comment:

Poor IS recoveries were observed for low level volatiles due to dirt in the threads of the vial preventing the sample from purging. Both low level vials had this problem, results are reported from the methanol high level.

This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.



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## Sample Id Cross Reference

December 24, 2019

SDG I.D.: GCE88391

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA

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Client Id	Lab Id	Matrix
LOAM STOCKPILE 1	CE88391	SOIL
LOAM STOCKPILE 2	CE88392	SOIL
STOCKPILE WEST 2	CE88393	SOIL
STOCKPILE EAST 2	CE88394	SOIL
LOCATION 1 12-13 FT	CE88395	SOIL
LOCATION 2 0-6 FT	CE88396	SOIL
LOCATION 2 6-12 FT	CE88397	SOIL
LOCATION 3 0-6 FT	CE88398	SOIL
LOCATION 3 6-12 FT	CE88399	SOIL
LOCATION 8 0-6 FT	CE88400	SOIL
LOCATION 8 6-12 FT	CE88401	SOIL
LOCATION 13 0-6 FT	CE88402	SOIL
LOCATION 13 6-12 FT	CE88403	SOIL
LOCATION 14 0-6 FT	CE88404	SOIL
LOCATION 14 6-12 FT	CE88405	SOIL
LOCATION 15 0-3 FT	CE88406	SOIL
LOCATION 15 3-6 FT	CE88407	SOIL
LOCATION 15 6-12 FT	CE88408	SOIL
LOCATION 1	CE88409	GROUND WATER
OVERLYIN AUL 1	CE88410	SOIL
LOC-10-0-6	CE88411	SOIL
LOC-10-6-12	CE88412	SOIL



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
12/13/19	13:30
12/16/19	16:31

### Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88391

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOAM STOCKPILE 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	30	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	30	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	300	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	3.6	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	36	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	12	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	12	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	99		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	87		%	1	12/18/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	97		%	1	12/18/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	120	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	6.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.033	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.33	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	103		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

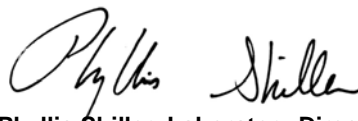
\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88392

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOAM STOCKPILE 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
2-Hexanone	ND	17	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	17	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	170	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
Bromochloromethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	2.0	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
m&p-Xylene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	20	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	6.8	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	6.8	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
o-Xylene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
Styrene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	290	ug/Kg	50	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	6.8	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	580	ug/Kg	50	12/17/19	JLI	SW8260C
Trichloroethene	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	6.8	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	86		%	1	12/18/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	97		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/18/19	JLI	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	96		%	50	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene (50x)	97		%	50	12/17/19	JLI	70 - 130 %
% Dibromofluoromethane (50x)	90		%	50	12/17/19	JLI	70 - 130 %
% Toluene-d8 (50x)	94		%	50	12/17/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	68	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	3.4	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	8.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	8.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	8.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	8.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	8.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.044	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.088	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.088	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.44	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.088	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.088	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.088	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	101		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	50	12/18/19	RM	70 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

#### **VPH:**

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

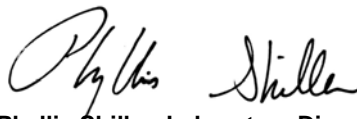
\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

#### **Volatile Comment:**

There was a suppression of the last internal standard in the low level analysis, all affected compounds are reported from the methanol preserved high level analysis which did not exhibit this interference.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Phyllis Shiller, Laboratory Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88393

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: STOCKPILE WEST 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
2-Hexanone	ND	1300	ug/Kg	50	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	400	ug/Kg	50	12/17/19	JLI	SW8260C
Acetone	ND	6000	ug/Kg	50	12/17/19	JLI	SW8260C
Acrylonitrile	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Benzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Bromobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Bromochloromethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
Bromoform	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
Bromomethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Chlorobenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Chloroethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Chloroform	ND	200	ug/Kg	50	12/17/19	JLI	SW8260C
Chloromethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
Dibromomethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Ethylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
m&p-Xylene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	1600	ug/Kg	50	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
Methylene chloride	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Naphthalene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
o-Xylene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Styrene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	530	ug/Kg	50	12/17/19	JLI	SW8260C
Toluene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Total Xylenes	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	110	ug/Kg	50	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	530	ug/Kg	50	12/17/19	JLI	SW8260C
Trichloroethene	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	530	ug/Kg	50	12/17/19	JLI	SW8260C
Vinyl chloride	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene (50x)	98		%	50	12/17/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane (50x)	91		%	50	12/17/19	JLI	70 - 130 %
% Toluene-d8 (50x)	101		%	50	12/17/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	5300	ug/Kg	50	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	260	ug/Kg	50	12/17/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.032	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.065	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.065	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.32	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.065	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.065	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.065	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	106		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	103		%	50	12/18/19	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

#### **VPH:**

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

#### **Volatile Comment:**

Poor IS recoveries were observed for low level volatiles due to dirt in the threads of the vial preventing the sample from purging.

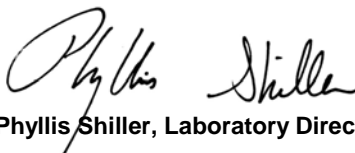
Both low level vials had this problem, results are reported from the methanol high level.

This resulted in elevated reporting limits that exceed the requested criteria for one or more analytes.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Phyllis Shiller, Laboratory Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date

12/13/19  
12/16/19

### Time

13:30  
16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88394

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: STOCKPILE EAST 2

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	35	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	35	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	350	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	4.2	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	42	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	14	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	14	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	14	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	100		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	90		%	1	12/18/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	101		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/18/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	140	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	7.0	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.029	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.29	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	100		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date      Time

12/13/19      13:30  
12/16/19      16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88395

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 1 12-13 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.41	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Arsenic	0.85	0.82	mg/Kg	1	12/17/19	EK	SW6010D
Barium	9.57	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Beryllium	< 0.33	0.33	mg/Kg	1	12/17/19	EK	SW6010D
Cadmium	< 0.41	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Chromium	7.86	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	7.26	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Lead	4.53	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Antimony	< 4.1	4.1	mg/Kg	1	12/17/19	EK	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	12/17/19	EK	SW6010D
Thallium	< 3.7	3.7	mg/Kg	1	12/17/19	EK	SW6010D
Vanadium	12.8	0.41	mg/Kg	1	12/17/19	EK	SW6010D
Zinc	16.4	0.8	mg/Kg	1	12/17/19	EK	SW6010D
Percent Solid	78		%		12/16/19	VT	SW846-%Solid
Conductivity - Soil Matrix	6450	500	umhos/cm	1	12/16/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/16/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/18/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/18/19	BJA	SW846-Ignit
pH at 25C - Soil	6.88	1.00	pH Units	1	12/16/19 22:15	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/18/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/18/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/18/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/16/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/17/19	RR/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/16/19	/BF	SW3050B
Extraction of TPH SM	Completed				12/17/19	GG/LA	SW3545A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/16/19	RM	MADEP VPH04

**Polychlorinated Biphenyls**

PCB-1016	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	85	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	85	ug/Kg	2	12/17/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	67		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	75		%	2	12/17/19	SC	30 - 150 %
% TCMX	71		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	72		%	2	12/17/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	63	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	92		%	1	12/18/19	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.5	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C

Client ID: LOCATION 1 12-13 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	37	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	37	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	370	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	4.5	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	45	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	15	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C

Client ID: LOCATION 1 12-13 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	15	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	99		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	99		%	1	12/17/19	JLI	70 - 130 %
% Dibromofluoromethane	96		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/17/19	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	150	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	7.4	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
1,2-Dichlorobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
1,3-Dichlorobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
1,4-Dichlorobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dichlorophenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dimethylphenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dinitrophenol	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dinitrotoluene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2,6-Dinitrotoluene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2-Chloronaphthalene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2-Chlorophenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2-Methylnaphthalene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
2-Nitroaniline	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
2-Nitrophenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
3-Nitroaniline	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
4-Chloroaniline	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
4-Nitroaniline	ND	670	ug/Kg	1	12/18/19	WB	SW8270D
4-Nitrophenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Acenaphthene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Acetophenone	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Aniline	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Anthracene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D

Client ID: LOCATION 1 12-13 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Benzidine	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(a)pyrene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(b)fluoranthene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(k)fluoranthene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Benzoic acid	ND	840	ug/Kg	1	12/18/19	WB	SW8270D
Benzyl butyl phthalate	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Carbazole	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Chrysene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Dibenzofuran	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Diethyl phthalate	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Dimethylphthalate	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Di-n-butylphthalate	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Di-n-octylphthalate	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Fluoranthene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Fluorene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorobutadiene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Hexachloroethane	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Isophorone	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Naphthalene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Nitrobenzene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodimethylamine	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Pentachloronitrobenzene	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Pentachlorophenol	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
Phenanthrene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Phenol	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Pyrene	ND	290	ug/Kg	1	12/18/19	WB	SW8270D
Pyridine	ND	420	ug/Kg	1	12/18/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	73		%	1	12/18/19	WB	30 - 130 %
% 2-Fluorobiphenyl	57		%	1	12/18/19	WB	30 - 130 %
% 2-Fluorophenol	50		%	1	12/18/19	WB	30 - 130 %
% Nitrobenzene-d5	60		%	1	12/18/19	WB	30 - 130 %
% Phenol-d5	58		%	1	12/18/19	WB	30 - 130 %
% Terphenyl-d14	56		%	1	12/18/19	WB	30 - 130 %
Field Extraction	Completed				12/13/19		SW5035A

**MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	ND	11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Benzene	ND	0.055	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
MTBE	ND	0.1	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Naphthalene	ND	0.55	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Toluene	ND	0.11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
o-Xylene	ND	0.11	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
<b>QA/QC Surrogates</b>							
% 2,5-Dibromotoluene (FID)	102		%	50	12/16/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	50	12/16/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Phyllis Shiller, Laboratory Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
12/13/19	13:30
12/16/19	16:31

### Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88396

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 2 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C

Client ID: LOCATION 2 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	28	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	3.4	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	34	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	102		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	101		%	1	12/17/19	JLI	70 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	101		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/17/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	110	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.033	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.067	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.067	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.33	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.067	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.067	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.067	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	103		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88397

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 2 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,1-Dichloroethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,1-Dichloroethene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,1-Dichloropropene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2-Dibromoethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2-Dichloroethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,2-Dichloropropane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,3-Dichloropropane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
2,2-Dichloropropane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
2-Chlorotoluene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
2-Hexanone	ND	37	ug/Kg	1	12/20/19	JLI	SW8260C
2-Isopropyltoluene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
4-Chlorotoluene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	37	ug/Kg	1	12/20/19	JLI	SW8260C
Acetone	ND	370	ug/Kg	1	12/20/19	JLI	SW8260C
Acrylonitrile	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Benzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Bromobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Bromochloromethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Bromodichloromethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Bromoform	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Bromomethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Carbon Disulfide	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Carbon tetrachloride	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Chlorobenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Chloroethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Chloroform	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Chloromethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Dibromochloromethane	ND	4.4	ug/Kg	1	12/20/19	JLI	SW8260C
Dibromomethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Dichlorodifluoromethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Ethylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Hexachlorobutadiene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Isopropylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
m&p-Xylene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	44	ug/Kg	1	12/20/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	12/20/19	JLI	SW8260C
Methylene chloride	ND	15	ug/Kg	1	12/20/19	JLI	SW8260C
Naphthalene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
n-Butylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
n-Propylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
o-Xylene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
p-Isopropyltoluene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
sec-Butylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Styrene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
tert-Butylbenzene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Tetrachloroethene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	12/20/19	JLI	SW8260C
Toluene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Total Xylenes	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	1	12/20/19	JLI	SW8260C
Trichloroethene	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Trichlorofluoromethane	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	15	ug/Kg	1	12/20/19	JLI	SW8260C
Vinyl chloride	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	97		%	1	12/20/19	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/20/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	95		%	1	12/20/19	JLI	70 - 130 %
% Toluene-d8	96		%	1	12/20/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	150	ug/Kg	1	12/20/19	JLI	SW8260C (OXY)
Diethyl ether	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	7.4	ug/Kg	1	12/20/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.028	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.28	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	99		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88398

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 3 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.9	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	24	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C

Client ID: LOCATION 3 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	24	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	240	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	2.9	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	29	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.5	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	9.5	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.5	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	9.5	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	9.5	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	99		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	99		%	1	12/17/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	97		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/17/19	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	95	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

**MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.3	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.3	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.3	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.3	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.3	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.032	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.063	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.063	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.32	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.063	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.063	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.063	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

**QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	104		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	99		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:**

Results are reported on an "as received" basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

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Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88399

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 3 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.3	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	19	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	19	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	190	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	2.3	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	23	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	7.6	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	7.6	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	7.6	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	7.6	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.6	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	98		%	1	12/18/19	JLI	70 - 130 %

Client ID: LOCATION 3 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	95		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/18/19	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	76	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	3.8	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

**MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	5.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	5.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	5.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.029	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.058	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.058	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.29	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.058	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.058	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.058	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

**QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	102		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88400

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 8 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C

Client ID: LOCATION 8 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	28	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	3.4	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	34	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	99		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	100		%	1	12/17/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	97		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/17/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	110	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.7	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	5.7	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.029	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.29	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.057	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	105		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	99		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

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The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88401

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 8 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.1	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	34	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	34	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	340	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	4.1	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	41	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	14	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	14	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	14	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	100		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	100		%	1	12/17/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	98		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/17/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	140	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	6.8	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.032	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.32	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	103		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	98		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88402

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 13 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Arsenic	5.49	0.71	mg/Kg	1	12/17/19	TH	SW6010D
Barium	57.2	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Beryllium	0.38	0.28	mg/Kg	1	12/17/19	TH	SW6010D
Cadmium	2.71	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Chromium	13.5	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Mercury	0.12	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	10.2	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Lead	132	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	12/17/19	TH	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/17/19	TH	SW6010D
TCLP Lead	0.32	0.10	mg/L	1	12/19/19	TH	SW846 1311/6010
Thallium	< 3.2	3.2	mg/Kg	1	12/17/19	TH	SW6010D
TCLP Metals Digestion	Completed				12/19/19	LS/LS	SW3010A
Vanadium	22.8	0.35	mg/Kg	1	12/17/19	TH	SW6010D
Zinc	126	0.7	mg/Kg	1	12/17/19	TH	SW6010D
Percent Solid	86		%		12/16/19	VT	SW846-%Solid
Conductivity - Soil Matrix	332	5	umhos/cm	1	12/16/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/16/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/18/19	KT/BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/18/19	KT/BJA	SW846-Ignit
pH at 25C - Soil	8.05	1.00	pH Units	1	12/16/19 22:15	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/18/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/18/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/18/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/16/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/17/19	RR/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B

Client ID: LOCATION 13 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/18/19	LS	SW1311
Total Metals Digest	Completed				12/16/19	JJ/AG/BF	SW3050B
Extraction of TPH SM	Completed				12/17/19	GG/LA	SW3545A
MA Petroleum Hydrocarbon (VPH)	Completed				12/16/19	RM	MADEP VPH04

**Polychlorinated Biphenyls**

PCB-1016	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	75	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	75	ug/Kg	2	12/17/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	67		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	75		%	2	12/17/19	SC	30 - 150 %
% TCMX	73		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	73		%	2	12/17/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	57	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	95		%	1	12/18/19	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
2,2-Dichloropropane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	46	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	46	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	460	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	5.0	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	55	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	18	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	18	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	18	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C

Client ID: LOCATION 13 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	18	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	18	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	100		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	99		%	1	12/17/19	JLI	70 - 130 %
% Dibromofluoromethane	97		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/17/19	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	180	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	9.2	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)

**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
4-Nitroaniline	ND	610	ug/Kg	1	12/18/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D

Client ID: LOCATION 13 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetophenone	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benz(a)anthracene	580	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(a)pyrene	580	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(b)fluoranthene	460	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(ghi)perylene	380	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(k)fluoranthene	380	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzoic acid	ND	770	ug/Kg	1	12/18/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Carbazole	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Chrysene	570	270	ug/Kg	1	12/18/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Fluoranthene	1100	270	ug/Kg	1	12/18/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	390	270	ug/Kg	1	12/18/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Phenanthrene	810	270	ug/Kg	1	12/18/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Pyrene	940	270	ug/Kg	1	12/18/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	72		%	1	12/18/19	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/18/19	WB	30 - 130 %
% 2-Fluorophenol	48		%	1	12/18/19	WB	30 - 130 %
% Nitrobenzene-d5	61		%	1	12/18/19	WB	30 - 130 %
% Phenol-d5	54		%	1	12/18/19	WB	30 - 130 %
% Terphenyl-d14	50		%	1	12/18/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				12/13/19		SW5035A
<b><u>MA Volatile Petroleum Hydrocarbons (VPH)</u></b>							
Unadjusted C5-C8 Aliphatics (*1)	ND	10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Benzene	ND	0.052	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
MTBE	ND	0.10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Naphthalene	ND	0.52	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Toluene	ND	0.10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
o-Xylene	ND	0.10	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
<b><u>QA/QC Surrogates</u></b>							
% 2,5-Dibromotoluene (FID)	96		%	50	12/16/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	50	12/16/19	RM	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

#### **VPH:**

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

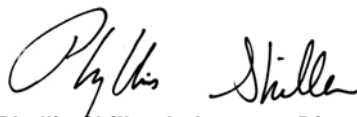
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

#### **TCLP Non-Volatile Extraction:**

Sample weight was < 100 grams (the minimum requirement of the method to insure homogeneity).

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Phyllis Shiller, Laboratory Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date      Time

12/13/19      13:30  
12/16/19      16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88403

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 13 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Arsenic	3.87	0.77	mg/Kg	1	12/17/19	TH	SW6010D
Barium	23.7	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Beryllium	< 0.31	0.31	mg/Kg	1	12/17/19	TH	SW6010D
Cadmium	< 0.39	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Chromium	13.2	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	12/17/19	RS	SW7471B
Nickel	9.69	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Lead	10.4	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	12/17/19	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	12/17/19	TH	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	12/17/19	TH	SW6010D
Vanadium	24.4	0.39	mg/Kg	1	12/17/19	TH	SW6010D
Zinc	27.2	0.8	mg/Kg	1	12/17/19	TH	SW6010D
Percent Solid	85		%		12/16/19	VT	SW846-%Solid
Conductivity - Soil Matrix	65	5	umhos/cm	1	12/16/19	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/16/19	AP	SW846-Corr
Flash Point	>200	200	Degree F	1	12/18/19	BJA	1010/CH7/ASTMD92
Ignitability	Passed	140	degree F	1	12/18/19	BJA	SW846-Ignit
pH at 25C - Soil	7.50	1.00	pH Units	1	12/16/19 22:15	AP	SW846 9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/18/19	KT/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	12/18/19	KT/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	12/18/19	KT/GD	SW846-React
Soil Extraction for PCB	Completed				12/16/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed				12/17/19	RR/AL	SW3545A
Mercury Digestion	Completed				12/17/19	LS/LS	SW7471B
Total Metals Digest	Completed				12/16/19	JJ/AG/BF	SW3050B
Extraction of TPH SM	Completed				12/17/19	GG/LA	SW3545A



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/16/19	RM	MADEP VPH04

**Polychlorinated Biphenyls**

PCB-1016	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1221	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1232	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1242	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1248	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1254	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1260	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1262	ND	78	ug/Kg	2	12/17/19	SC	SW8082A
PCB-1268	ND	78	ug/Kg	2	12/17/19	SC	SW8082A

**QA/QC Surrogates**

% DCBP	72		%	2	12/17/19	SC	30 - 150 %
% DCBP (Confirmation)	81		%	2	12/17/19	SC	30 - 150 %
% TCMX	77		%	2	12/17/19	SC	30 - 150 %
% TCMX (Confirmation)	77		%	2	12/17/19	SC	30 - 150 %

**TPH by GC (Extractable (C9-C36))**

Fuel Oil #2 / Diesel Fuel	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #4	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Fuel Oil #6	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Kerosene	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Motor Oil	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Other Oil	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO
Unidentified	ND	59	mg/kg	1	12/18/19	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	79		%	1	12/18/19	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.4	ug/Kg	1	12/17/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,1-Dichloropropene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dibromoethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,2-Dichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,3-Dichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
2-Chlorotoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	12/17/19	JLI	SW8260C
2-Isopropyltoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
4-Chlorotoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
4-Methyl-2-pentanone	ND	28	ug/Kg	1	12/17/19	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	12/17/19	JLI	SW8260C
Acrylonitrile	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Benzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromochloromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromodichloromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromoform	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Bromomethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon Disulfide	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Carbon tetrachloride	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chlorobenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chloroform	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Chloromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromochloromethane	ND	3.4	ug/Kg	1	12/17/19	JLI	SW8260C
Dibromomethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Dichlorodifluoromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Ethylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Hexachlorobutadiene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Isopropylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
m&p-Xylene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	34	ug/Kg	1	12/17/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Naphthalene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
n-Butylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
n-Propylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
o-Xylene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
p-Isopropyltoluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
sec-Butylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Styrene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
tert-Butylbenzene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrachloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Toluene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Total Xylenes	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Trichloroethene	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
Trichlorofluoromethane	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/17/19	JLI	SW8260C
Vinyl chloride	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	99		%	1	12/17/19	JLI	70 - 130 %
% Bromofluorobenzene	100		%	1	12/17/19	JLI	70 - 130 %
% Dibromofluoromethane	97		%	1	12/17/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/17/19	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	110	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Diethyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.6	ug/Kg	1	12/17/19	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
4-Nitroaniline	ND	610	ug/Kg	1	12/18/19	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D

Client ID: LOCATION 13 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Benzoic acid	ND	770	ug/Kg	1	12/18/19	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Carbazole	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/18/19	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/18/19	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	68		%	1	12/18/19	WB	30 - 130 %
% 2-Fluorobiphenyl	51		%	1	12/18/19	WB	30 - 130 %
% 2-Fluorophenol	46		%	1	12/18/19	WB	30 - 130 %
% Nitrobenzene-d5	55		%	1	12/18/19	WB	30 - 130 %
% Phenol-d5	54		%	1	12/18/19	WB	30 - 130 %
% Terphenyl-d14	48		%	1	12/18/19	WB	30 - 130 %
Field Extraction	Completed				12/13/19		SW5035A

**MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	8.1	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Unadjusted C9-C12 Aliphatics (*1)	ND	8.1	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	8.1	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	8.1	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	8.1	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Benzene	ND	0.041	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.081	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
MTBE	ND	0.081	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Naphthalene	ND	0.41	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
Toluene	ND	0.081	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.081	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
o-Xylene	ND	0.081	mg/Kg	50	12/16/19	RM	MA VPH 5/2004
<b>QA/QC Surrogates</b>							
% 2,5-Dibromotoluene (FID)	99		%	50	12/16/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	50	12/16/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Phyllis Shiller, Laboratory Director**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88404

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 14 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.8	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	23	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C

Client ID: LOCATION 14 0-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	23	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	230	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	2.8	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	28	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.3	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	9.3	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.3	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	9.3	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	9.3	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	100		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	12/18/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/18/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	93	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.7	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	5.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	5.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	5.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.026	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.052	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.052	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.26	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.052	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.052	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.052	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	107		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	100		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88405

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 14 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.7	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	22	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C

Client ID: LOCATION 14 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	22	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	220	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	2.7	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	27	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	8.9	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	8.9	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	8.9	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	8.9	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	8.9	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	98		%	1	12/18/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	107		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/18/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	89	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.5	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.6	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.033	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.33	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.066	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	101		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	93		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88406

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 15 0-3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.3	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	28	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	3.3	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	33	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	98		%	1	12/18/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/18/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	110	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.6	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.032	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.32	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.064	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	94		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88407

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 15 3-6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.1	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	26	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	26	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	260	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	3.1	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	31	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	10	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	10	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	10	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	10	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	103		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	100		%	1	12/18/19	JLI	70 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	110		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/18/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	100	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.2	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.8	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.034	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.068	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.068	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.34	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.068	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.068	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.068	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	103		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	99		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88408

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 15 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.4	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloroethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloroethene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloropropene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dibromoethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichloroethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichloropropane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,3-Dichloropropane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
2,2-Dichloropropane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
2-Chlorotoluene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
2-Hexanone	ND	20	ug/Kg	1	12/19/19	JLI	SW8260C
2-Isopropyltoluene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
4-Chlorotoluene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C

Client ID: LOCATION 15 6-12 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	20	ug/Kg	1	12/19/19	JLI	SW8260C
Acetone	ND	200	ug/Kg	1	12/19/19	JLI	SW8260C
Acrylonitrile	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Benzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Bromobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Bromochloromethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Bromodichloromethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Bromoform	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Bromomethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Carbon Disulfide	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Carbon tetrachloride	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Chlorobenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Chloroethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Chloroform	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Chloromethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Dibromochloromethane	ND	2.4	ug/Kg	1	12/19/19	JLI	SW8260C
Dibromomethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Dichlorodifluoromethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Ethylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Hexachlorobutadiene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Isopropylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
m&p-Xylene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	24	ug/Kg	1	12/19/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	7.9	ug/Kg	1	12/19/19	JLI	SW8260C
Methylene chloride	ND	7.9	ug/Kg	1	12/19/19	JLI	SW8260C
Naphthalene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
n-Butylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
n-Propylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
o-Xylene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
p-Isopropyltoluene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
sec-Butylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Styrene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
tert-Butylbenzene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Tetrachloroethene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	7.9	ug/Kg	1	12/19/19	JLI	SW8260C
Toluene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Total Xylenes	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	7.9	ug/Kg	1	12/19/19	JLI	SW8260C
Trichloroethene	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Trichlorofluoromethane	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.9	ug/Kg	1	12/19/19	JLI	SW8260C
Vinyl chloride	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	102		%	1	12/19/19	JLI	70 - 130 %
% Bromofluorobenzene	104		%	1	12/19/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	107		%	1	12/19/19	JLI	70 - 130 %
% Toluene-d8	103		%	1	12/19/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	79	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Diethyl ether	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.0	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	5.5	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.028	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.28	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.055	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	100		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	102		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: GROUND WATER  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88409

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOCATION 1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Semi-Volatile Extraction	Completed					12/17/19	P/AK	E625.1

### Volatiles

1,1,1-Trichloroethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,1,2,2-tetrachloroethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,1,2-Trichloroethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,1-Dichloroethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,1-Dichloroethene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,2-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,2-Dichloroethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,2-Dichloropropane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,3-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
1,4-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Benzene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Bromodichloromethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Bromoform	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Bromomethane	ND	0.50	0.50	ug/L	1	12/17/19	MH	E624.1
Carbon tetrachloride	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Chlorobenzene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Chloroethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Chloroform	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Chloromethane	1.8	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
cis-1,2-Dichloroethene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
cis-1,3-Dichloropropene	ND	0.40	0.25	ug/L	1	12/17/19	MH	E624.1
Dibromochloromethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Ethylbenzene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
m&p-Xylene	ND	0.50	0.42	ug/L	1	12/17/19	MH	E624.1
Methyl tert-butyl ether (MTBE)	ND	1.0	0.50	ug/L	1	12/17/19	MH	E624.1

Client ID: LOCATION 1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Methylene chloride	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
o-Xylene	ND	0.50	0.45	ug/L	1	12/17/19	MH	E624.1
Tetrachloroethene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Toluene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
trans-1,2-Dichloroethene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
trans-1,3-Dichloropropene	ND	0.40	0.25	ug/L	1	12/17/19	MH	E624.1
Trichloroethene	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Trichlorofluoromethane	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1
Vinyl chloride	ND	0.50	0.25	ug/L	1	12/17/19	MH	E624.1

**QA/QC Surrogates**

% 1,2-dichlorobenzene-d4	101			%	1	12/17/19	MH	70 - 130 %
% Bromofluorobenzene	91			%	1	12/17/19	MH	70 - 130 %
% Dibromofluoromethane	105			%	1	12/17/19	MH	70 - 130 %
% Toluene-d8	103			%	1	12/17/19	MH	70 - 130 %

**Semivolatiles by (SIM)**

Acenaphthene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Acenaphthylene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Benzo(a)anthracene	ND	0.08	0.08	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Benzo(a)pyrene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Benzo(b)fluoranthene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Benzo(g,h,i)perylene	ND	0.20	0.20	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Benzo(k)fluoranthene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Chrysene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Dibenz(a,h)anthracene	ND	0.04	0.02	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Hexachlorobenzene	ND	0.12	0.12	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Hexachlorobutadiene	ND	0.20	0.20	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Hexachlorocyclopentadiene	ND	0.20	0.20	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Indeno(1,2,3-c,d)pyrene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Nitrobenzene	ND	0.20	0.20	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
N-Nitrosodimethylamine	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Pentachlorophenol	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Phenanthrene	ND	0.10	0.10	ug/L	1	12/19/19	WB	E625.1/E625.1SIM
Pyridine	ND	1.0	2.5	ug/L	1	12/19/19	WB	E625.1/E625.1SIM

**QA/QC Surrogates**

% 2,4,6-Tribromophenol	70			%	1	12/19/19	WB	15 - 110 %
% 2-Fluorobiphenyl	53			%	1	12/19/19	WB	40 - 140 %
% 2-Fluorophenol	45			%	1	12/19/19	WB	15 - 110 %
% Nitrobenzene-d5	47			%	1	12/19/19	WB	40 - 140 %
% Phenol-d5	51			%	1	12/19/19	WB	15 - 110 %
% Terphenyl-d14	62			%	1	12/19/19	WB	40 - 140 %

**Semivolatiles**

1,2,4-Trichlorobenzene	ND	10	3.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
1,2-Dichlorobenzene	ND	10	2.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
1,2-Diphenylhydrazine	ND	10	10	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
1,3-Dichlorobenzene	ND	10	3.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
1,4-Dichlorobenzene	ND	5.0	3.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,4,5-Trichlorophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,4,6-Trichlorophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM

Client ID: LOCATION 1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
2,4-Dichlorophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,4-Dimethylphenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,4-Dinitrophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,4-Dinitrotoluene	ND	10	3.9	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,6-Dichlorophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2,6-Dinitrotoluene	ND	10	3.2	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2-Chloronaphthalene	ND	10	2.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2-Chlorophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2-Methylnaphthalene	ND	10	3.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2-Methylphenol (o-cresol)	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2-Nitroaniline	ND	20	10	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
2-Nitrophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
3&4-Methylphenol (m&p-cresol)	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
3,3'-Dichlorobenzidine	ND	10	4.7	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
3-Nitroaniline	ND	10	10	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4,6-Dinitro-2-methylphenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4-Bromophenyl phenyl ether	ND	10	2.9	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4-Chloro-3-methylphenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4-Chloroaniline	ND	10	4.7	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4-Chlorophenyl phenyl ether	ND	10	3.4	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4-Nitroaniline	ND	10	3.3	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
4-Nitrophenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Anthracene	ND	10	3.3	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Benzidine	ND	10	5.9	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Benzoic acid	ND	20	20	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Benzyl alcohol	ND	20	10	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Benzyl butyl phthalate	ND	10	2.6	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Bis(2-chloroethoxy)methane	ND	10	2.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Bis(2-chloroethyl)ether	ND	10	2.7	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Bis(2-chloroisopropyl)ether	ND	10	2.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Bis(2-ethylhexyl)phthalate	3.8	2.0	2.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Dibenzofuran	ND	2.0	2.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Diethyl phthalate	ND	10	3.2	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Dimethylphthalate	ND	10	3.1	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Di-n-butylphthalate	ND	10	2.7	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Di-n-octylphthalate	ND	10	2.6	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Fluoranthene	ND	10	3.2	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Fluorene	ND	10	3.3	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Hexachloroethane	ND	2.0	2.0	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Isophorone	ND	10	2.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Naphthalene	ND	10	2.9	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
N-Nitrosodi-n-propylamine	ND	10	3.2	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
N-Nitrosodiphenylamine	ND	10	3.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Phenol	ND	10	1.8	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
Pyrene	ND	10	3.4	ug/L	1	12/20/19	AW	E625.1/E625.1SIM
<b><u>QA/QC Surrogates</u></b>								
% 2,4,6-Tribromophenol	93			%	1	12/20/19	AW	15 - 130 %
% 2-Fluorobiphenyl	67			%	1	12/20/19	AW	30 - 130 %
% 2-Fluorophenol	44			%	1	12/20/19	AW	10 - 130 %

Client ID: LOCATION 1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
% Nitrobenzene-d5	58			%	1	12/20/19	AW	15 - 130 %
% Phenol-d5	53			%	1	12/20/19	AW	10 - 130 %
% Terphenyl-d14	74			%	1	12/20/19	AW	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level LOD=Limit of Detection  
MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

#### 624 Analyses:

Acrylonitrile, 2-Chloroethyl vinyl ether and Acrolein could not be analyzed due to HCL preserved vial, these compounds can only be analyzed on an AS IS vial.

#### VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



**Phyllis Shiller, Laboratory Director**

**December 24, 2019**

**Reviewed and Released by: Phyllis Shiller, Laboratory Director**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88410

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: OVERLYIN AUL 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.1	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloroethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloroethene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloropropene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dibromoethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichloroethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichloropropane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,3-Dichloropropane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
2,2-Dichloropropane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
2-Chlorotoluene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
2-Hexanone	ND	26	ug/Kg	1	12/19/19	JLI	SW8260C
2-Isopropyltoluene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
4-Chlorotoluene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	26	ug/Kg	1	12/19/19	JLI	SW8260C
Acetone	ND	260	ug/Kg	1	12/19/19	JLI	SW8260C
Acrylonitrile	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Benzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Bromobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Bromochloromethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Bromodichloromethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Bromoform	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Bromomethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Carbon Disulfide	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Carbon tetrachloride	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Chlorobenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Chloroethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Chloroform	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Chloromethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Dibromochloromethane	ND	3.1	ug/Kg	1	12/19/19	JLI	SW8260C
Dibromomethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Dichlorodifluoromethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Ethylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Hexachlorobutadiene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Isopropylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
m&p-Xylene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	31	ug/Kg	1	12/19/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	10	ug/Kg	1	12/19/19	JLI	SW8260C
Methylene chloride	ND	10	ug/Kg	1	12/19/19	JLI	SW8260C
Naphthalene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
n-Butylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
n-Propylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
o-Xylene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
p-Isopropyltoluene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
sec-Butylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Styrene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
tert-Butylbenzene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Tetrachloroethene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	10	ug/Kg	1	12/19/19	JLI	SW8260C
Toluene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Total Xylenes	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	10	ug/Kg	1	12/19/19	JLI	SW8260C
Trichloroethene	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Trichlorofluoromethane	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	10	ug/Kg	1	12/19/19	JLI	SW8260C
Vinyl chloride	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	101		%	1	12/19/19	JLI	70 - 130 %
% Bromofluorobenzene	103		%	1	12/19/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	104		%	1	12/19/19	JLI	70 - 130 %
% Toluene-d8	102		%	1	12/19/19	JLI	70 - 130 %

### **Oxygenates & Dioxane**

1,4-Dioxane	ND	100	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Diethyl ether	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.2	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

### **MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	7.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	7.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	7.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	7.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	7.4	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.037	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.074	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.074	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.37	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.074	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.074	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.074	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

### **QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	101		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	96		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88411

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOC-10-0-6

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.8	ug/Kg	1	12/19/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloroethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloroethene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,1-Dichloropropene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dibromoethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichloroethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,2-Dichloropropane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,3-Dichloropropane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
2,2-Dichloropropane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
2-Chlorotoluene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
2-Hexanone	ND	31	ug/Kg	1	12/19/19	JLI	SW8260C
2-Isopropyltoluene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
4-Chlorotoluene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	31	ug/Kg	1	12/19/19	JLI	SW8260C
Acetone	ND	310	ug/Kg	1	12/19/19	JLI	SW8260C
Acrylonitrile	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Benzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Bromobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Bromochloromethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Bromodichloromethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Bromoform	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Bromomethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Carbon Disulfide	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Carbon tetrachloride	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Chlorobenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Chloroethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Chloroform	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Chloromethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Dibromochloromethane	ND	3.8	ug/Kg	1	12/19/19	JLI	SW8260C
Dibromomethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Dichlorodifluoromethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Ethylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Hexachlorobutadiene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Isopropylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
m&p-Xylene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	38	ug/Kg	1	12/19/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	12/19/19	JLI	SW8260C
Methylene chloride	ND	13	ug/Kg	1	12/19/19	JLI	SW8260C
Naphthalene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
n-Butylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
n-Propylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
o-Xylene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
p-Isopropyltoluene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
sec-Butylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Styrene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
tert-Butylbenzene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Tetrachloroethene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	12/19/19	JLI	SW8260C
Toluene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Total Xylenes	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	12/19/19	JLI	SW8260C
Trichloroethene	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Trichlorofluoromethane	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	13	ug/Kg	1	12/19/19	JLI	SW8260C
Vinyl chloride	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	102		%	1	12/19/19	JLI	70 - 130 %
% Bromofluorobenzene	104		%	1	12/19/19	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	106		%	1	12/19/19	JLI	70 - 130 %
% Toluene-d8	102		%	1	12/19/19	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	130	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Diethyl ether	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	6.3	ug/Kg	1	12/19/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

**MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	7.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	7.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	7.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	7.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	7.2	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.036	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.072	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.072	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.36	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.072	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.072	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.072	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

**QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	94		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	98		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

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Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia Berger  
Clean Properties, Inc.  
111 Boston Post Road Suite 214  
Sudbury, MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: Standard  
P.O.#: 29198

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

### Date Time

12/13/19 13:30  
12/16/19 16:31

## Laboratory Data

SDG ID: GCE88391  
Phoenix ID: CE88412

Project ID: 515 SOMERVILLE AVE., SOMERVILLE, MA  
Client ID: LOC-10-6-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				12/18/19	RM	MADEP VPH04

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloroethene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,1-Dichloropropene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dibromoethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloroethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,2-Dichloropropane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,3-Dichloropropane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
2,2-Dichloropropane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
2-Chlorotoluene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
2-Hexanone	ND	24	ug/Kg	1	12/18/19	JLI	SW8260C
2-Isopropyltoluene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
4-Chlorotoluene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	24	ug/Kg	1	12/18/19	JLI	SW8260C
Acetone	ND	240	ug/Kg	1	12/18/19	JLI	SW8260C
Acrylonitrile	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Benzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Bromobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Bromochloromethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Bromodichloromethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Bromoform	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Bromomethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon Disulfide	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Carbon tetrachloride	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Chlorobenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Chloroform	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Chloromethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromochloromethane	ND	2.9	ug/Kg	1	12/18/19	JLI	SW8260C
Dibromomethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Dichlorodifluoromethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Ethylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Hexachlorobutadiene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Isopropylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
m&p-Xylene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl Ethyl Ketone	ND	29	ug/Kg	1	12/18/19	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.7	ug/Kg	1	12/18/19	JLI	SW8260C
Methylene chloride	ND	9.7	ug/Kg	1	12/18/19	JLI	SW8260C
Naphthalene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
n-Butylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
n-Propylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
o-Xylene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
p-Isopropyltoluene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
sec-Butylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Styrene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
tert-Butylbenzene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrachloroethene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.7	ug/Kg	1	12/18/19	JLI	SW8260C
Toluene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Total Xylenes	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	9.7	ug/Kg	1	12/18/19	JLI	SW8260C
Trichloroethene	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorofluoromethane	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
Trichlorotrifluoroethane	ND	9.7	ug/Kg	1	12/18/19	JLI	SW8260C
Vinyl chloride	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	104		%	1	12/18/19	JLI	70 - 130 %
% Bromofluorobenzene	101		%	1	12/18/19	JLI	70 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	102		%	1	12/18/19	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/18/19	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	97	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Diethyl ether	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.9	ug/Kg	1	12/18/19	JLI	SW8260C (OXY)
Field Extraction	Completed				12/13/19		SW5035A

**MA Volatile Petroleum Hydrocarbons (VPH)**

Unadjusted C5-C8 Aliphatics (*1)	ND	6.1	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	6.1	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.1	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	6.1	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.1	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Benzene	ND	0.031	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Ethyl Benzene	ND	0.061	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
MTBE	ND	0.061	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Naphthalene	ND	0.31	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
Toluene	ND	0.061	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
m,p-Xylenes	ND	0.061	mg/Kg	50	12/18/19	RM	MA VPH 5/2004
o-Xylene	ND	0.061	mg/Kg	50	12/18/19	RM	MA VPH 5/2004

**QA/QC Surrogates**

% 2,5-Dibromotoluene (FID)	94		%	50	12/18/19	RM	70 - 130 %
% 2,5-Dibromotoluene (PID)	95		%	50	12/18/19	RM	70 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

VPH:

\*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.

\*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.

\*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Phyllis Shiller, Laboratory Director



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
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## QA/QC Report

December 24, 2019

### QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 510578 (mg/kg), QC Sample No: CE88403 2X (CE88395, CE88402, CE88403)

Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	101	107	5.8	90.5	85.7	5.4	75 - 125	20
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 510527 (mg/kg), QC Sample No: CE88041 (CE88402, CE88403)

#### ICP Metals - Soil

Antimony	BRL	3.3	<3.7	<3.7	NC	88.5	83.1	6.3	83.6			75 - 125	30
Arsenic	BRL	0.67	4.55	10.1	75.8	90.1	84.7	6.2	81.3			75 - 125	30
Barium	BRL	0.33	31.7	42.4	28.9	84.3	89.4	5.9	95.9			75 - 125	30
Beryllium	BRL	0.27	0.18	0.25	NC	91.2	91.2	0.0	90.1			75 - 125	30
Cadmium	BRL	0.33	<0.37	0.38	NC	76.4	78.8	3.1	85.8			75 - 125	30
Chromium	BRL	0.33	10.2	10.5	2.90	98.6	90.8	8.2	89.7			75 - 125	30
Lead	BRL	0.33	12.3	31.2	86.9	91.4	83.7	8.8	85.8			75 - 125	30
Nickel	BRL	0.33	4.05	5.43	29.1	91.4	90.0	1.5	87.9			75 - 125	30
Selenium	BRL	1.3	<1.5	<1.5	NC	96.5	93.6	3.1	93.4			75 - 125	30
Silver	BRL	0.33	<0.37	<0.37	NC	98.1	88.8	10.0	89.5			75 - 125	30
Thallium	BRL	3.0	<3.3	<3.3	NC	92.9	88.2	5.2	87.9			75 - 125	30
Vanadium	BRL	0.33	13.1	13.5	3.00	98.2	92.6	5.9	92.9			75 - 125	30
Zinc	BRL	0.67	16.9	24.6	37.1	91.4	85.5	6.7	86.9			75 - 125	30

QA/QC Batch 510540 (mg/kg), QC Sample No: CE88395 (CE88395)

#### ICP Metals - Soil

Antimony	BRL	3.3	<4.1	<3.9	NC	91.6	101	9.8	91.7			75 - 125	30
Arsenic	BRL	0.67	0.85	0.79	NC	88.7	100	12.0	87.0			75 - 125	30
Barium	BRL	0.33	9.57	8.07	17.0	89.9	83.9	6.9	96.7			75 - 125	30
Beryllium	BRL	0.27	<0.33	<0.31	NC	96.3	102	5.7	96.5			75 - 125	30
Cadmium	BRL	0.33	<0.41	<0.39	NC	88.9	87.4	1.7	90.8			75 - 125	30
Chromium	BRL	0.33	7.86	7.55	4.00	95.1	110	14.5	94.8			75 - 125	30
Lead	BRL	0.33	4.53	4.21	7.30	89.4	102	13.2	90.3			75 - 125	30
Nickel	BRL	0.33	7.26	7.17	1.20	93.6	99.3	5.9	93.0			75 - 125	30
Selenium	BRL	1.3	<1.6	<1.6	NC	76.7	82.4	7.2	96.3			75 - 125	30
Silver	BRL	0.33	<0.41	<0.39	NC	93.2	108	14.7	95.3			75 - 125	30
Thallium	BRL	3.0	<3.7	<3.5	NC	95.4	103	7.7	94.0			75 - 125	30
Vanadium	BRL	0.33	12.8	11.5	10.7	96.9	110	12.7	96.0			75 - 125	30
Zinc	BRL	0.67	16.4	15.1	8.30	90.6	99.2	9.1	89.1			75 - 125	30

QA/QC Batch 510970 (mg/L), QC Sample No: CE90409 (CE88402)

#### ICP Metals - TCLP Extraction

Lead	BRL	0.010	0.248	0.250	0.80	106	106	0.0	102			75 - 125	20
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r = This parameter is outside laboratory RPD specified recovery limits.



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## QA/QC Report

December 24, 2019

### QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 510762 (mg/Kg), QC Sample No: CE88018 4.95X (CE88395, CE88402, CE88403)													
Reactivity Cyanide	BRL	0.05	<6	<5.6	NC	94.9						80 - 120	20
Reactivity Sulfide	BRL	20	<20	<20	NC	96.0						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 510565 (PH), QC Sample No: CE81362 (CE88395, CE88402, CE88403)													
pH at 25C - Soil			7.11	7.09	0.30	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510500 (umhos/cm), QC Sample No: CE87840 (CE88395, CE88402, CE88403)													
Conductivity - Soil Matrix	BRL	5	166	166	0	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 510838 (Degree F), QC Sample No: CE89529 (CE88395, CE88402, CE88403)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													



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## QA/QC Report

December 24, 2019

### QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 510662 (mg/Kg), QC Sample No: CE89143 (CE88395, CE88402, CE88403)

#### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	90	74	19.5	88	57	42.8	50 - 150	30	r
% n-Pentacosane	73	%	75	63	17.4	69	50	31.9	50 - 150	30	r

Comment:

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 510471 (ug/Kg), QC Sample No: CE87173 2X (CE88395, CE88402, CE88403)

#### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	74			87	70	21.7	40 - 140	30	
PCB-1221	ND	33							40 - 140	30	
PCB-1232	ND	33							40 - 140	30	
PCB-1242	ND	33							40 - 140	30	
PCB-1248	ND	33							40 - 140	30	
PCB-1254	ND	33							40 - 140	30	
PCB-1260	ND	33	75			96	74	25.9	40 - 140	30	
PCB-1262	ND	33							40 - 140	30	
PCB-1268	ND	33							40 - 140	30	
% DCBP (Surrogate Rec)	77	%	87			91	73	22.0	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm)	79	%	91			101	81	22.0	30 - 150	30	
% TCMX (Surrogate Rec)	69	%	78			93	74	22.8	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm)	68	%	81			95	77	20.9	30 - 150	30	

Comment:

This batch consists of a Blank, LCS, MS and MSD.

QA/QC Batch 510646 (ug/kg), QC Sample No: CE88702 (CE88395, CE88402, CE88403)

#### Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	55	62	12.0	60	60	0.0	40 - 140	30	
1,2,4-Trichlorobenzene	ND	230	51	60	16.2	58	56	3.5	40 - 140	30	
1,2-Dichlorobenzene	ND	180	41	51	21.7	51	52	1.9	40 - 140	30	
1,2-Diphenylhydrazine	ND	230	69	67	2.9	67	64	4.6	40 - 140	30	
1,3-Dichlorobenzene	ND	230	36	48	28.6	47	50	6.2	40 - 140	30	I
1,4-Dichlorobenzene	ND	230	39	49	22.7	49	52	5.9	40 - 140	30	I
2,4,5-Trichlorophenol	ND	230	74	73	1.4	76	74	2.7	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	70	73	4.2	74	71	4.1	30 - 130	30	
2,4-Dichlorophenol	ND	130	66	71	7.3	73	74	1.4	30 - 130	30	
2,4-Dimethylphenol	ND	230	76	77	1.3	79	75	5.2	30 - 130	30	
2,4-Dinitrophenol	ND	230	44	39	12.0	68	69	1.5	30 - 130	30	
2,4-Dinitrotoluene	ND	130	68	71	4.3	71	70	1.4	40 - 140	30	
2,6-Dinitrotoluene	ND	130	71	76	6.8	75	75	0.0	40 - 140	30	
2-Chloronaphthalene	ND	230	61	66	7.9	65	58	11.4	40 - 140	30	
2-Chlorophenol	ND	230	52	62	17.5	69	66	4.4	30 - 130	30	
2-Methylnaphthalene	ND	230	53	61	14.0	63	60	4.9	40 - 140	30	
2-Methylphenol (o-cresol)	ND	230	61	64	4.8	79	76	3.9	30 - 130	30	

## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Nitroaniline	ND	330	99	103	4.0	93	101	8.2	40 - 140	30	
2-Nitrophenol	ND	230	67	72	7.2	77	74	4.0	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	61	67	9.4	78	78	0.0	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	64	68	6.1	42	48	13.3	40 - 140	30	
3-Nitroaniline	ND	330	78	81	3.8	73	74	1.4	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	62	65	4.7	79	79	0.0	30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	64	72	11.8	68	63	7.6	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	76	76	0.0	80	83	3.7	30 - 130	30	
4-Chloroaniline	ND	230	58	64	9.8	61	56	8.5	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	230	66	70	5.9	67	66	1.5	40 - 140	30	
4-Nitroaniline	ND	230	78	77	1.3	79	76	3.9	40 - 140	30	
4-Nitrophenol	ND	230	82	80	2.5	94	82	13.6	30 - 130	30	
Acenaphthene	ND	230	65	68	4.5	67	64	4.6	40 - 140	30	
Acenaphthylene	ND	130	61	66	7.9	62	60	3.3	40 - 140	30	
Acetophenone	ND	230	48	54	11.8	60	61	1.7	40 - 140	30	
Aniline	ND	330	38	42	10.0	48	34	34.1	40 - 140	30	I,m,r
Anthracene	ND	230	64	69	7.5	68	60	12.5	40 - 140	30	
Benz(a)anthracene	ND	230	65	68	4.5	66	60	9.5	40 - 140	30	
Benzidine	ND	330	14	17	19.4	<10	<10	NC	40 - 140	30	I,m
Benzo(a)pyrene	ND	130	69	73	5.6	69	60	14.0	40 - 140	30	
Benzo(b)fluoranthene	ND	160	65	67	3.0	65	56	14.9	40 - 140	30	
Benzo(ghi)perylene	ND	230	61	64	4.8	67	59	12.7	40 - 140	30	
Benzo(k)fluoranthene	ND	230	68	71	4.3	67	59	12.7	40 - 140	30	
Benzoic Acid	ND	330	23	19	19.0	24	29	18.9	30 - 130	30	I,m
Benzyl butyl phthalate	ND	230	69	72	4.3	71	64	10.4	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	58	64	9.8	64	62	3.2	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	39	50	24.7	50	64	24.6	40 - 140	30	I
Bis(2-chloroisopropyl)ether	ND	230	42	48	13.3	52	51	1.9	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	68	72	5.7	71	64	10.4	40 - 140	30	
Carbazole	ND	230	64	67	4.6	66	60	9.5	40 - 140	30	
Chrysene	ND	230	63	67	6.2	64	57	11.6	40 - 140	30	
Dibenz(a,h)anthracene	ND	130	65	67	3.0	74	65	12.9	40 - 140	30	
Dibenzofuran	ND	230	63	66	4.7	64	62	3.2	40 - 140	30	
Diethyl phthalate	ND	230	69	69	0.0	68	66	3.0	40 - 140	30	
Dimethylphthalate	ND	230	65	68	4.5	65	65	0.0	40 - 140	30	
Di-n-butylphthalate	ND	670	70	75	6.9	69	62	10.7	40 - 140	30	
Di-n-octylphthalate	ND	230	73	74	1.4	81	70	14.6	40 - 140	30	
Fluoranthene	ND	230	61	65	6.3	55	49	11.5	40 - 140	30	
Fluorene	ND	230	67	71	5.8	71	68	4.3	40 - 140	30	
Hexachlorobenzene	ND	130	70	72	2.8	72	62	14.9	40 - 140	30	
Hexachlorobutadiene	ND	230	51	60	16.2	52	55	5.6	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	33	39	16.7	39	35	10.8	40 - 140	30	I,m
Hexachloroethane	ND	130	42	51	19.4	50	53	5.8	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	66	70	5.9	75	65	14.3	40 - 140	30	
Isophorone	ND	130	54	59	8.8	59	58	1.7	40 - 140	30	
Naphthalene	ND	230	53	60	12.4	57	57	0.0	40 - 140	30	
Nitrobenzene	ND	130	55	62	12.0	71	68	4.3	40 - 140	30	
N-Nitrosodimethylamine	ND	230	31	39	22.9	41	45	9.3	40 - 140	30	I
N-Nitrosodi-n-propylamine	ND	130	59	64	8.1	73	72	1.4	40 - 140	30	
N-Nitrosodiphenylamine	ND	130	66	69	4.4	67	67	0.0	40 - 140	30	
Pentachloronitrobenzene	ND	230	67	72	7.2	69	63	9.1	40 - 140	30	
Pentachlorophenol	ND	230	62	65	4.7	92	89	3.3	30 - 130	30	
Phenanthrene	ND	130	62	67	7.8	64	60	6.5	40 - 140	30	

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Phenol	ND	230	60	67	11.0	80	80	0.0	30 - 130	30
Pyrene	ND	230	64	69	7.5	56	49	13.3	40 - 140	30
Pyridine	ND	230	18	22	20.0	27	31	13.8	40 - 140	30
% 2,4,6-Tribromophenol	38	%	77	75	2.6	81	71	13.2	30 - 130	30
% 2-Fluorobiphenyl	48	%	55	59	7.0	56	53	5.5	30 - 130	30
% 2-Fluorophenol	42	%	42	49	15.4	55	56	1.8	30 - 130	30
% Nitrobenzene-d5	53	%	53	59	10.7	66	64	3.1	30 - 130	30
% Phenol-d5	49	%	55	58	5.3	69	69	0.0	30 - 130	30
% Terphenyl-d14	49	%	52	56	7.4	51	46	10.3	30 - 130	30

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 510666 (ug/L), QC Sample No: CE87877 (CE88409)

## Semivolatiles (SIM) - Ground Water

Acenaphthene	ND	0.50	59	70	17.1				60 - 132	48	I
Acenaphthylene	ND	0.50	52	64	20.7				54 - 126	74	I
Benz(a)anthracene	ND	0.50	69	78	12.2				42 - 133	53	
Benzo(a)pyrene	ND	0.50	71	81	13.2				32 - 148	72	
Benzo(b)fluoranthene	ND	0.50	73	85	15.2				42 - 140	71	
Benzo(ghi)perylene	ND	0.50	72	84	15.4				10 - 195	97	
Benzo(k)fluoranthene	ND	0.50	84	102	19.4				25 - 146	63	
Chrysene	ND	0.50	74	85	13.8				44 - 140	87	
Dibenz(a,h)anthracene	ND	0.50	84	95	12.3				10 - 200	126	
Hexachlorobenzene	ND	0.50	61	73	17.9				8 - 142	55	
Hexachlorobutadiene	ND	0.50	41	43	4.8				38 - 120	62	
Hexachlorocyclopentadiene	ND	0.50	19	19	0.0				30 - 130	20	I
Indeno(1,2,3-cd)pyrene	ND	0.50	76	83	8.8				10 - 151	99	
Nitrobenzene	ND	0.50	46	45	2.2				54 - 158	62	I
N-Nitrosodimethylamine	ND	0.05	31	35	12.1				30 - 130	20	
Pentachlorophenol	ND	0.50	65	67	3.0				38 - 152	86	
Phenanthrene	ND	0.50	62	71	13.5				65 - 120	39	I
Pyridine	ND	0.50	21	33	44.4				30 - 130	20	I,r
% 2,4,6-Tribromophenol	69	%	64	72	11.8				15 - 130	20	
% 2-Fluorobiphenyl	53	%	48	58	18.9				30 - 130	20	
% 2-Fluorophenol	47	%	31	33	6.3				10 - 130	20	
% Nitrobenzene-d5	44	%	39	42	7.4				15 - 130	20	
% Phenol-d5	52	%	36	36	0.0				10 - 130	20	
% Terphenyl-d14	63	%	56	64	13.3				30 - 130	20	

QA/QC Batch 510666 (ug/L), QC Sample No: CE87877 (CE88409)

## Semivolatiles - Ground Water

1,2,4-Trichlorobenzene	ND	3.5	61	72	16.5				57 - 130	50	
1,2-Dichlorobenzene	ND	1.0	50	63	23.0				30 - 130	20	r
1,2-Diphenylhydrazine	ND	1.6	75	109	37.0				30 - 130	20	r
1,3-Dichlorobenzene	ND	1.0	50	61	19.8				46 - 154	20	
1,4-Dichlorobenzene	ND	1.0	50	61	19.8				30 - 130	20	
2,4,5-Trichlorophenol	ND	1.0	88	116	27.5				30 - 130	20	r
2,4,6-Trichlorophenol	ND	1.0	86	120	33.0				52 - 129	58	
2,4-Dichlorophenol	ND	1.0	72	91	23.3				53 - 122	50	
2,4-Dimethylphenol	ND	1.0	79	96	19.4				42 - 120	58	
2,4-Dinitrophenol	ND	1.0	85	127	39.6				10 - 173	132	
2,4-Dinitrotoluene	ND	3.5	100	133	28.3				48 - 127	42	I
2,6-Dichlorophenol	ND	10	72	91	23.3				30 - 130	20	r

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
2,6-Dinitrotoluene	ND	3.5	97	128	27.6				68 - 137	48
2-Chloronaphthalene	ND	3.5	72	98	30.6				65 - 120	24 r
2-Chlorophenol	ND	1.0	56	66	16.4				36 - 120	61
2-Methylnaphthalene	ND	3.5	66	82	21.6				30 - 130	20 r
2-Methylphenol (o-cresol)	ND	1.0	66	83	22.8				30 - 130	20 r
2-Nitroaniline	ND	3.5	121	>200	NC				30 - 130	20 l
2-Nitrophenol	ND	1.0	85	100	16.2				45 - 167	55
3&4-Methylphenol (m&p-cresol)	ND	1.0	67	88	27.1				30 - 130	20 r
3,3'-Dichlorobenzidine	ND	5.0	37	122	106.9				8 - 213	108
3-Nitroaniline	ND	5.0	73	138	61.6				30 - 130	20 l,r
4,6-Dinitro-2-methylphenol	ND	1.0	101	134	28.1				30 - 130	20 l,r
4-Bromophenyl phenyl ether	ND	3.5	87	118	30.2				65 - 120	43
4-Chloro-3-methylphenol	ND	1.0	89	115	25.5				41 - 128	73
4-Chloroaniline	ND	3.5	59	99	50.6				30 - 130	20 r
4-Chlorophenyl phenyl ether	ND	1.0	85	112	27.4				38 - 145	61
4-Nitroaniline	ND	5.0	90	121	29.4				30 - 130	20 r
4-Nitrophenol	ND	1.0	89	130	37.4				13 - 129	131 l
Anthracene	ND	1.5	85	111	26.5				43 - 120	66
Benzidine	ND	4.5	127	153	18.6				30 - 130	20 l
Benzoic acid	ND	10	44	52	16.7				30 - 130	20
Benzyl Alcohol	ND	5.0	56	88	44.4				30 - 130	20 r
Benzyl butyl phthalate	ND	1.5	104	134	25.2				10 - 140	60
Bis(2-chloroethoxy)methane	ND	3.5	54	76	33.8				49 - 165	54
Bis(2-chloroethyl)ether	ND	1.0	45	56	21.8				43 - 126	108
Bis(2-chloroisopropyl)ether	ND	1.0	45	56	21.8				63 - 139	76 l
Bis(2-ethylhexyl)phthalate	ND	1.5	98	128	26.5				29 - 137	82
Dibenzofuran	ND	3.5	78	104	28.6				30 - 130	20 r
Diethyl phthalate	ND	1.5	97	125	25.2				10 - 120	100 l
Dimethylphthalate	ND	1.5	88	119	30.0				10 - 120	183
Di-n-butylphthalate	ND	1.5	100	130	26.1				8 - 120	47 l
Di-n-octylphthalate	ND	1.5	111	140	23.1				19 - 132	69 l
Fluoranthene	ND	1.5	89	118	28.0				43 - 121	66
Fluorene	ND	1.5	85	111	26.5				70 - 120	38
Hexachloroethane	ND	3.5	50	62	21.4				55 - 120	52 l
Isophorone	ND	3.5	61	82	29.4				47 - 180	93
Naphthalene	ND	1.5	59	72	19.8				36 - 120	65
N-Nitrosodi-n-propylamine	ND	3.5	62	87	33.6				14 - 198	87
N-Nitrosodiphenylamine	ND	3.5	70	122	54.2				30 - 130	20 r
Phenol	ND	1.0	50	61	19.8				17 - 120	64
Pyrene	ND	1.5	92	120	26.4				70 - 120	49
% 2,4,6-Tribromophenol	92	%	105	137	26.4				15 - 130	20 l,r
% 2-Fluorobiphenyl	68	%	68	91	28.9				30 - 130	20 r
% 2-Fluorophenol	47	%	37	44	17.3				10 - 130	20
% Nitrobenzene-d5	59	%	54	72	28.6				15 - 130	20 r
% Phenol-d5	59	%	43	51	17.0				10 - 130	20
% Terphenyl-d14	77	%	78	102	26.7				30 - 130	20 r

QA/QC Batch 510639 (ug/kg), QC Sample No: CE88291 (CE88395, CE88402, CE88403)

## Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	97	96	1.0				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	94	93	1.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	88	88	0.0				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	88	88	0.0				70 - 130	30

## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloroethane	ND	5.0	91	90	1.1				70 - 130	30
1,1-Dichloroethene	ND	5.0	97	99	2.0				70 - 130	30
1,1-Dichloropropene	ND	5.0	89	85	4.6				70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	89	94	5.5				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	85	83	2.4				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	87	93	6.7				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	89	91	2.2				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	92	89	3.3				70 - 130	30
1,2-Dibromoethane	ND	5.0	89	89	0.0				70 - 130	30
1,2-Dichlorobenzene	ND	5.0	86	86	0.0				70 - 130	30
1,2-Dichloroethane	ND	5.0	88	88	0.0				70 - 130	30
1,2-Dichloropropane	ND	5.0	88	88	0.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	92	93	1.1				70 - 130	30
1,3-Dichlorobenzene	ND	5.0	86	88	2.3				70 - 130	30
1,3-Dichloropropane	ND	5.0	87	87	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	5.0	84	85	1.2				70 - 130	30
1,4-dioxane	ND	100	93	91	2.2				40 - 160	30
2,2-Dichloropropane	ND	5.0	94	94	0.0				70 - 130	30
2-Chlorotoluene	ND	5.0	89	89	0.0				70 - 130	30
2-Hexanone	ND	25	80	81	1.2				40 - 160	30
2-Isopropyltoluene	ND	5.0	101	100	1.0				70 - 130	30
4-Chlorotoluene	ND	5.0	87	88	1.1				70 - 130	30
4-Methyl-2-pentanone	ND	25	85	86	1.2				40 - 160	30
Acetone	ND	10	72	71	1.4				40 - 160	30
Acrylonitrile	ND	5.0	88	88	0.0				70 - 130	30
Benzene	ND	1.0	92	92	0.0				70 - 130	30
Bromobenzene	ND	5.0	88	88	0.0				70 - 130	30
Bromochloromethane	ND	5.0	92	93	1.1				70 - 130	30
Bromodichloromethane	ND	5.0	93	93	0.0				70 - 130	30
Bromoform	ND	5.0	98	99	1.0				70 - 130	30
Bromomethane	ND	5.0	103	104	1.0				40 - 160	30
Carbon Disulfide	ND	5.0	104	104	0.0				70 - 130	30
Carbon tetrachloride	ND	5.0	99	99	0.0				70 - 130	30
Chlorobenzene	ND	5.0	89	90	1.1				70 - 130	30
Chloroethane	ND	5.0	108	106	1.9				70 - 130	30
Chloroform	ND	5.0	89	90	1.1				70 - 130	30
Chloromethane	ND	5.0	91	91	0.0				40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	87	87	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	92	91	1.1				70 - 130	30
Dibromochloromethane	ND	3.0	96	98	2.1				70 - 130	30
Dibromomethane	ND	5.0	89	88	1.1				70 - 130	30
Dichlorodifluoromethane	ND	5.0	103	102	1.0				40 - 160	30
Diethyl ether	ND	5.0	90	90	0.0				70 - 130	30
Di-isopropyl ether	ND	5.0	95	95	0.0				70 - 130	30
Ethyl tert-butyl ether	ND	5.0	94	95	1.1				70 - 130	30
Ethylbenzene	ND	1.0	93	94	1.1				70 - 130	30
Hexachlorobutadiene	ND	5.0	99	101	2.0				70 - 130	30
Isopropylbenzene	ND	1.0	93	94	1.1				70 - 130	30
m&p-Xylene	ND	2.0	91	93	2.2				70 - 130	30
Methyl ethyl ketone	ND	5.0	72	68	5.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	90	90	0.0				70 - 130	30
Methylene chloride	ND	5.0	85	84	1.2				70 - 130	30
Naphthalene	ND	5.0	99	100	1.0				70 - 130	30



# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Butylbenzene	ND	1.0	94	97	3.1				70 - 130	30
n-Propylbenzene	ND	1.0	92	93	1.1				70 - 130	30
o-Xylene	ND	2.0	93	95	2.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	95	97	2.1				70 - 130	30
sec-Butylbenzene	ND	1.0	101	102	1.0				70 - 130	30
Styrene	ND	5.0	92	94	2.2				70 - 130	30
tert-amyl methyl ether	ND	5.0	97	96	1.0				70 - 130	30
tert-Butylbenzene	ND	1.0	95	95	0.0				70 - 130	30
Tetrachloroethene	ND	5.0	96	97	1.0				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	81	82	1.2				70 - 130	30
Toluene	ND	1.0	92	93	1.1				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	98	98	0.0				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	91	91	0.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	99	99	0.0				70 - 130	30
Trichloroethene	ND	5.0	94	94	0.0				70 - 130	30
Trichlorofluoromethane	ND	5.0	109	109	0.0				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	108	110	1.8				70 - 130	30
Vinyl chloride	ND	5.0	94	92	2.2				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	99	1.0				70 - 130	30
% Bromofluorobenzene	97	%	101	102	1.0				70 - 130	30
% Dibromofluoromethane	97	%	100	99	1.0				70 - 130	30
% Toluene-d8	98	%	98	99	1.0				70 - 130	30

Comment:

The Low Level MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 510826 (ug/kg), QC Sample No: CE88292 (CE88396, CE88398, CE88400, CE88401)

## Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	100	101	1.0	102	94	8.2	70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	97	98	1.0	105	101	3.9	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	95	92	3.2	105	88	17.6	70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	95	93	2.1	95	86	9.9	70 - 130	30	
1,1-Dichloroethane	ND	5.0	93	93	0.0	103	98	5.0	70 - 130	30	
1,1-Dichloroethene	ND	5.0	98	100	2.0	104	102	1.9	70 - 130	30	
1,1-Dichloropropene	ND	5.0	97	87	10.9	102	91	11.4	70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	102	101	1.0	33	29	12.9	70 - 130	30	m
1,2,3-Trichloropropane	ND	5.0	90	84	6.9	111	90	20.9	70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	104	102	1.9	39	34	13.7	70 - 130	30	m
1,2,4-Trimethylbenzene	ND	1.0	94	95	1.1	89	75	17.1	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	100	91	9.4	85	74	13.8	70 - 130	30	
1,2-Dibromoethane	ND	5.0	96	94	2.1	98	88	10.8	70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	92	92	0.0	77	63	20.0	70 - 130	30	m
1,2-Dichloroethane	ND	5.0	100	98	2.0	108	98	9.7	70 - 130	30	
1,2-Dichloropropane	ND	5.0	93	92	1.1	97	91	6.4	70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	94	95	1.1	96	82	15.7	70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	93	94	1.1	82	68	18.7	70 - 130	30	m
1,3-Dichloropropane	ND	5.0	94	92	2.2	100	90	10.5	70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	92	92	0.0	79	65	19.4	70 - 130	30	m
1,4-dioxane	ND	100	104	99	4.9	172	>200	NC	40 - 160	30	m
2,2-Dichloropropane	ND	5.0	98	99	1.0	108	103	4.7	70 - 130	30	
2-Chlorotoluene	ND	5.0	92	94	2.2	97	82	16.8	70 - 130	30	
2-Hexanone	ND	25	93	87	6.7	66	53	21.8	40 - 160	30	
2-Isopropyltoluene	ND	5.0	102	104	1.9	92	80	14.0	70 - 130	30	

## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
4-Chlorotoluene	ND	5.0	92	93	1.1	93	78	17.5	70 - 130	30
4-Methyl-2-pentanone	ND	25	101	93	8.2	81	71	13.2	40 - 160	30
Acetone	ND	10	83	77	7.5	67	64	4.6	40 - 160	30
Acrylonitrile	ND	5.0	102	95	7.1	68	58	15.9	70 - 130	30
Benzene	ND	1.0	94	94	0.0	99	93	6.3	70 - 130	30
Bromobenzene	ND	5.0	91	92	1.1	98	82	17.8	70 - 130	30
Bromochloromethane	ND	5.0	96	96	0.0	103	95	8.1	70 - 130	30
Bromodichloromethane	ND	5.0	101	100	1.0	103	97	6.0	70 - 130	30
Bromoform	ND	5.0	106	104	1.9	93	83	11.4	70 - 130	30
Bromomethane	ND	5.0	109	117	7.1	130	132	1.5	40 - 160	30
Carbon Disulfide	ND	5.0	104	104	0.0	105	100	4.9	70 - 130	30
Carbon tetrachloride	ND	5.0	99	103	4.0	106	102	3.8	70 - 130	30
Chlorobenzene	ND	5.0	93	92	1.1	93	82	12.6	70 - 130	30
Chloroethane	ND	5.0	106	112	5.5	126	119	5.7	70 - 130	30
Chloroform	ND	5.0	94	95	1.1	103	97	6.0	70 - 130	30
Chloromethane	ND	5.0	92	93	1.1	100	99	1.0	40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	88	92	4.4	94	88	6.6	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	97	98	1.0	96	88	8.7	70 - 130	30
Dibromochloromethane	ND	3.0	104	103	1.0	105	94	11.1	70 - 130	30
Dibromomethane	ND	5.0	96	94	2.1	96	87	9.8	70 - 130	30
Dichlorodifluoromethane	ND	5.0	110	110	0.0	119	117	1.7	40 - 160	30
Diethyl ether	ND	5.0	100	97	3.0	113	111	1.8	70 - 130	30
Di-isopropyl ether	ND	5.0	102	102	0.0	115	108	6.3	70 - 130	30
Ethyl tert-butyl ether	ND	5.0	103	101	2.0	115	109	5.4	70 - 130	30
Ethylbenzene	ND	1.0	94	94	0.0	93	85	9.0	70 - 130	30
Hexachlorobutadiene	ND	5.0	102	104	1.9	51	43	17.0	70 - 130	30
Isopropylbenzene	ND	1.0	94	94	0.0	107	93	14.0	70 - 130	30
m&p-Xylene	ND	2.0	94	94	0.0	92	83	10.3	70 - 130	30
Methyl ethyl ketone	ND	5.0	91	71	24.7	83	65	24.3	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	101	98	3.0	109	103	5.7	70 - 130	30
Methylene chloride	ND	5.0	88	87	1.1	73	71	2.8	70 - 130	30
Naphthalene	ND	5.0	111	106	4.6	49	40	20.2	70 - 130	30
n-Butylbenzene	ND	1.0	99	99	0.0	80	68	16.2	70 - 130	30
n-Propylbenzene	ND	1.0	94	95	1.1	100	85	16.2	70 - 130	30
o-Xylene	ND	2.0	96	95	1.0	92	84	9.1	70 - 130	30
p-Isopropyltoluene	ND	1.0	98	99	1.0	88	73	18.6	70 - 130	30
sec-Butylbenzene	ND	1.0	100	102	2.0	97	83	15.6	70 - 130	30
Styrene	ND	5.0	97	97	0.0	90	79	13.0	70 - 130	30
tert-amyl methyl ether	ND	5.0	107	103	3.8	115	107	7.2	70 - 130	30
tert-Butylbenzene	ND	1.0	94	96	2.1	97	84	14.4	70 - 130	30
Tetrachloroethene	ND	5.0	98	98	0.0	92	88	4.4	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	93	87	6.7	91	88	3.4	70 - 130	30
Toluene	ND	1.0	94	95	1.1	94	89	5.5	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	97	98	1.0	100	97	3.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	101	99	2.0	95	85	11.1	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	113	108	4.5	118	97	19.5	70 - 130	30
Trichloroethene	ND	5.0	95	95	0.0	99	94	5.2	70 - 130	30
Trichlorofluoromethane	ND	5.0	112	113	0.9	126	123	2.4	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	109	107	1.9	115	113	1.8	70 - 130	30
Vinyl chloride	ND	5.0	92	93	1.1	98	97	1.0	70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0	98	99	1.0	70 - 130	30
% Bromofluorobenzene	99	%	104	102	1.9	96	98	2.1	70 - 130	30
% Dibromofluoromethane	97	%	100	99	1.0	101	99	2.0	70 - 130	30

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Toluene-d8	99	%	100	100	0.0	97	98	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 511257 (ug/kg), QC Sample No: CE88410 (CE88408, CE88410, CE88411)

## Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	114	112	1.8				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	104	103	1.0				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	108	105	2.8				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	102	100	2.0				70 - 130	30
1,1-Dichloroethane	ND	5.0	100	99	1.0				70 - 130	30
1,1-Dichloroethene	ND	5.0	107	105	1.9				70 - 130	30
1,1-Dichloropropene	ND	5.0	100	94	6.2				70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	116	116	0.0				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	98	105	6.9				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	118	112	5.2				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	106	103	2.9				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	115	114	0.9				70 - 130	30
1,2-Dibromoethane	ND	5.0	109	106	2.8				70 - 130	30
1,2-Dichlorobenzene	ND	5.0	105	102	2.9				70 - 130	30
1,2-Dichloroethane	ND	5.0	106	104	1.9				70 - 130	30
1,2-Dichloropropane	ND	5.0	98	96	2.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	108	106	1.9				70 - 130	30
1,3-Dichlorobenzene	ND	5.0	104	103	1.0				70 - 130	30
1,3-Dichloropropane	ND	5.0	104	103	1.0				70 - 130	30
1,4-Dichlorobenzene	ND	5.0	104	101	2.9				70 - 130	30
1,4-dioxane	ND	100	103	102	1.0				40 - 160	30
2,2-Dichloropropane	ND	5.0	104	103	1.0				70 - 130	30
2-Chlorotoluene	ND	5.0	104	103	1.0				70 - 130	30
2-Hexanone	ND	25	94	92	2.2				40 - 160	30
2-Isopropyltoluene	ND	5.0	108	105	2.8				70 - 130	30
4-Chlorotoluene	ND	5.0	104	102	1.9				70 - 130	30
4-Methyl-2-pentanone	ND	25	96	95	1.0				40 - 160	30
Acetone	ND	10	85	84	1.2				40 - 160	30
Acrylonitrile	ND	5.0	99	98	1.0				70 - 130	30
Benzene	ND	1.0	102	100	2.0				70 - 130	30
Bromobenzene	ND	5.0	105	103	1.9				70 - 130	30
Bromochloromethane	ND	5.0	108	106	1.9				70 - 130	30
Bromodichloromethane	ND	5.0	108	108	0.0				70 - 130	30
Bromoform	ND	5.0	119	119	0.0				70 - 130	30
Bromomethane	ND	5.0	114	111	2.7				40 - 160	30
Carbon Disulfide	ND	5.0	106	106	0.0				70 - 130	30
Carbon tetrachloride	ND	5.0	109	107	1.9				70 - 130	30
Chlorobenzene	ND	5.0	104	102	1.9				70 - 130	30
Chloroethane	ND	5.0	98	97	1.0				70 - 130	30
Chloroform	ND	5.0	101	102	1.0				70 - 130	30
Chloromethane	ND	5.0	84	84	0.0				40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	97	96	1.0				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	106	102	3.8				70 - 130	30
Dibromochloromethane	ND	3.0	117	115	1.7				70 - 130	30
Dibromomethane	ND	5.0	104	101	2.9				70 - 130	30
Dichlorodifluoromethane	ND	5.0	100	98	2.0				40 - 160	30
Diethyl ether	ND	5.0	92	94	2.2				70 - 130	30

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Di-isopropyl ether	ND	5.0	98	96	2.1				70 - 130	30
Ethyl tert-butyl ether	ND	5.0	100	99	1.0				70 - 130	30
Ethylbenzene	ND	1.0	104	104	0.0				70 - 130	30
Hexachlorobutadiene	ND	5.0	114	107	6.3				70 - 130	30
Isopropylbenzene	ND	1.0	106	103	2.9				70 - 130	30
m&p-Xylene	ND	2.0	106	103	2.9				70 - 130	30
Methyl ethyl ketone	ND	5.0	83	80	3.7				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	103	103	0.0				70 - 130	30
Methylene chloride	ND	5.0	94	94	0.0				70 - 130	30
Naphthalene	ND	5.0	128	128	0.0				70 - 130	30
n-Butylbenzene	ND	1.0	109	104	4.7				70 - 130	30
n-Propylbenzene	ND	1.0	104	101	2.9				70 - 130	30
o-Xylene	ND	2.0	107	105	1.9				70 - 130	30
p-Isopropyltoluene	ND	1.0	111	107	3.7				70 - 130	30
sec-Butylbenzene	ND	1.0	115	111	3.5				70 - 130	30
Styrene	ND	5.0	109	107	1.9				70 - 130	30
tert-amyl methyl ether	ND	5.0	103	101	2.0				70 - 130	30
tert-Butylbenzene	ND	1.0	109	105	3.7				70 - 130	30
Tetrachloroethene	ND	5.0	105	101	3.9				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	91	89	2.2				70 - 130	30
Toluene	ND	1.0	103	100	3.0				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	108	107	0.9				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	109	106	2.8				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	117	110	6.2				70 - 130	30
Trichloroethene	ND	5.0	104	103	1.0				70 - 130	30
Trichlorofluoromethane	ND	5.0	104	103	1.0				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	109	102	6.6				70 - 130	30
Vinyl chloride	ND	5.0	84	84	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	102	%	102	102	0.0				70 - 130	30
% Bromofluorobenzene	103	%	105	107	1.9				70 - 130	30
% Dibromofluoromethane	104	%	104	105	1.0				70 - 130	30
% Toluene-d8	102	%	103	102	1.0				70 - 130	30

Comment:

The MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 510619H (ug/kg), QC Sample No: CE88604 50X (CE88392 (50X) )

## Volatiles - Soil (High Level)

1,2,3-Trichlorobenzene	ND	250	107	106	0.9	100	104	3.9	70 - 130	30
1,2,3-Trichloropropane	ND	250	90	94	4.3	93	98	5.2	70 - 130	30
1,2,4-Trichlorobenzene	ND	250	109	105	3.7	102	105	2.9	70 - 130	30
1,2,4-Trimethylbenzene	ND	250	97	96	1.0	100	98	2.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	250	91	93	2.2	90	95	5.4	70 - 130	30
1,2-Dichlorobenzene	ND	250	96	98	2.1	97	98	1.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	250	96	95	1.0	100	97	3.0	70 - 130	30
1,3-Dichlorobenzene	ND	250	98	97	1.0	98	98	0.0	70 - 130	30
1,4-Dichlorobenzene	ND	250	96	94	2.1	96	96	0.0	70 - 130	30
2-Chlorotoluene	ND	250	97	97	0.0	100	97	3.0	70 - 130	30
2-Isopropyltoluene	ND	250	108	107	0.9	112	109	2.7	70 - 130	30
4-Chlorotoluene	ND	250	96	94	2.1	97	96	1.0	70 - 130	30
Bromobenzene	ND	250	96	96	0.0	97	96	1.0	70 - 130	30
Hexachlorobutadiene	ND	250	110	109	0.9	112	109	2.7	70 - 130	30
Isopropylbenzene	ND	250	97	98	1.0	104	100	3.9	70 - 130	30

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Naphthalene	ND	250	102	102	0.0	99	104	4.9	70 - 130	30
n-Butylbenzene	ND	250	105	103	1.9	107	104	2.8	70 - 130	30
n-Propylbenzene	ND	250	100	98	2.0	105	101	3.9	70 - 130	30
p-Isopropyltoluene	ND	250	102	101	1.0	106	103	2.9	70 - 130	30
sec-Butylbenzene	ND	250	105	104	1.0	110	106	3.7	70 - 130	30
tert-Butylbenzene	ND	250	97	97	0.0	103	99	4.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	250	96	100	4.1	92	99	7.3	70 - 130	30
% 1,2-dichlorobenzene-d4	96	%	100	101	1.0	99	100	1.0	70 - 130	30
% Bromofluorobenzene	97	%	97	96	1.0	95	95	0.0	70 - 130	30
% Dibromofluoromethane	92	%	96	93	3.2	93	95	2.1	70 - 130	30
% Toluene-d8	94	%	101	101	0.0	101	102	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 510634H (ug/kg), QC Sample No: CE88689 50X (CE88393 (50X) )

## Volatiles - Soil (High Level)

1,1,1,2-Tetrachloroethane	ND	250	107	109	1.9	106	104	1.9	70 - 130	30
1,1,1-Trichloroethane	ND	250	91	91	0.0	101	94	7.2	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	250	101	104	2.9	105	102	2.9	70 - 130	30
1,1,2-Trichloroethane	ND	250	96	99	3.1	99	100	1.0	70 - 130	30
1,1-Dichloroethane	ND	250	89	89	0.0	101	94	7.2	70 - 130	30
1,1-Dichloroethene	ND	250	46	45	2.2	75	70	6.9	70 - 130	30
1,1-Dichloropropene	ND	250	96	101	5.1	110	104	5.6	70 - 130	30
1,2,3-Trichlorobenzene	ND	250	112	115	2.6	100	108	7.7	70 - 130	30
1,2,3-Trichloropropane	ND	250	103	102	1.0	103	99	4.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	250	115	116	0.9	105	110	4.7	70 - 130	30
1,2,4-Trimethylbenzene	ND	250	97	99	2.0	102	99	3.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	250	113	116	2.6	113	114	0.9	70 - 130	30
1,2-Dibromoethane	ND	250	100	102	2.0	104	101	2.9	70 - 130	30
1,2-Dichlorobenzene	ND	250	100	101	1.0	101	99	2.0	70 - 130	30
1,2-Dichloroethane	ND	250	98	101	3.0	102	102	0.0	70 - 130	30
1,2-Dichloropropane	ND	250	97	97	0.0	102	101	1.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	250	98	100	2.0	106	101	4.8	70 - 130	30
1,3-Dichlorobenzene	ND	250	105	106	0.9	107	103	3.8	70 - 130	30
1,3-Dichloropropane	ND	250	97	100	3.0	100	99	1.0	70 - 130	30
1,4-Dichlorobenzene	ND	250	100	100	0.0	102	99	3.0	70 - 130	30
1,4-dioxane	ND	5000	100	110	9.5	102	104	1.9	40 - 160	30
2,2-Dichloropropane	ND	250	94	94	0.0	104	97	7.0	70 - 130	30
2-Chlorotoluene	ND	250	100	103	3.0	106	101	4.8	70 - 130	30
2-Hexanone	ND	1300	100	104	3.9	110	107	2.8	40 - 160	30
2-Isopropyltoluene	ND	250	104	108	3.8	112	108	3.6	70 - 130	30
4-Chlorotoluene	ND	250	102	104	1.9	106	103	2.9	70 - 130	30
4-Methyl-2-pentanone	ND	1300	103	107	3.8	114	111	2.7	40 - 160	30
Acetone	ND	500	63	60	4.9	82	72	13.0	40 - 160	30
Acrylonitrile	ND	250	93	92	1.1	110	101	8.5	70 - 130	30
Benzene	ND	250	96	100	4.1	106	102	3.8	70 - 130	30
Bromobenzene	ND	250	102	106	3.8	104	102	1.9	70 - 130	30
Bromochloromethane	ND	250	94	94	0.0	97	94	3.1	70 - 130	30
Bromodichloromethane	ND	250	97	102	5.0	98	99	1.0	70 - 130	30
Bromoform	ND	250	108	111	2.7	101	102	1.0	70 - 130	30
Bromomethane	ND	250	55	60	8.7	76	74	2.7	40 - 160	30
Carbon Disulfide	ND	250	50	49	2.0	78	75	3.9	70 - 130	30
Carbon tetrachloride	ND	250	93	94	1.1	105	96	9.0	70 - 130	30

## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Chlorobenzene	ND	250	99	102	3.0	107	103	3.8	70 - 130	30	
Chloroethane	ND	250	41	41	0.0	59	55	7.0	70 - 130	30	I,m
Chloroform	ND	250	92	91	1.1	98	94	4.2	70 - 130	30	
Chloromethane	ND	250	95	94	1.1	105	98	6.9	40 - 160	30	
cis-1,2-Dichloroethene	ND	250	91	90	1.1	99	91	8.4	70 - 130	30	
cis-1,3-Dichloropropene	ND	250	98	101	3.0	101	100	1.0	70 - 130	30	
Dibromochloromethane	ND	150	108	110	1.8	104	102	1.9	70 - 130	30	
Dibromomethane	ND	250	96	98	2.1	101	99	2.0	70 - 130	30	
Dichlorodifluoromethane	ND	250	87	88	1.1	105	98	6.9	40 - 160	30	
Diethyl ether	ND	250	32	30	6.5	49	46	6.3	70 - 130	30	I,m
Di-isopropyl ether	ND	250	96	97	1.0	103	99	4.0	70 - 130	30	
Ethyl tert-butyl ether	ND	250	96	96	0.0	99	96	3.1	70 - 130	30	
Ethylbenzene	ND	250	102	106	3.8	113	105	7.3	70 - 130	30	
Hexachlorobutadiene	ND	250	117	122	4.2	122	119	2.5	70 - 130	30	
Isopropylbenzene	ND	250	99	102	3.0	110	104	5.6	70 - 130	30	
m&p-Xylene	ND	250	104	105	1.0	113	107	5.5	70 - 130	30	
Methyl ethyl ketone	ND	250	91	94	3.2	103	101	2.0	40 - 160	30	
Methyl t-butyl ether (MTBE)	ND	250	82	82	0.0	91	88	3.4	70 - 130	30	
Methylene chloride	ND	250	72	71	1.4	87	82	5.9	70 - 130	30	
Naphthalene	ND	250	107	111	3.7	103	110	6.6	70 - 130	30	
n-Butylbenzene	ND	250	104	104	0.0	113	107	5.5	70 - 130	30	
n-Propylbenzene	ND	250	101	105	3.9	110	107	2.8	70 - 130	30	
o-Xylene	ND	250	103	106	2.9	110	106	3.7	70 - 130	30	
p-Isopropyltoluene	ND	250	103	105	1.9	111	107	3.7	70 - 130	30	
sec-Butylbenzene	ND	250	106	109	2.8	117	111	5.3	70 - 130	30	
Styrene	ND	250	104	106	1.9	110	104	5.6	70 - 130	30	
tert-amyl methyl ether	ND	250	102	106	3.8	104	103	1.0	70 - 130	30	
tert-Butylbenzene	ND	250	98	102	4.0	108	103	4.7	70 - 130	30	
Tetrachloroethene	ND	250	108	111	2.7	117	113	3.5	70 - 130	30	
Tetrahydrofuran (THF)	ND	250	97	97	0.0	106	102	3.8	70 - 130	30	
Toluene	ND	250	101	104	2.9	109	105	3.7	70 - 130	30	
trans-1,2-Dichloroethene	ND	250	83	83	0.0	105	97	7.9	70 - 130	30	
trans-1,3-Dichloropropene	ND	250	98	102	4.0	99	99	0.0	70 - 130	30	
trans-1,4-dichloro-2-butene	ND	250	107	109	1.9	110	109	0.9	70 - 130	30	
Trichloroethene	ND	250	100	102	2.0	110	105	4.7	70 - 130	30	
Trichlorofluoromethane	ND	250	27	27	0.0	38	35	8.2	70 - 130	30	I,m
Trichlorotrifluoroethane	ND	250	56	55	1.8	94	89	5.5	70 - 130	30	I
Vinyl chloride	ND	250	80	81	1.2	97	92	5.3	70 - 130	30	
% 1,2-dichlorobenzene-d4	98	%	100	100	0.0	101	101	0.0	70 - 130	30	
% Bromofluorobenzene	101	%	101	102	1.0	102	101	1.0	70 - 130	30	
% Dibromofluoromethane	95	%	100	96	4.1	96	97	1.0	70 - 130	30	
% Toluene-d8	101	%	99	100	1.0	100	101	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 510995 (ug/kg), QC Sample No: CE89155 (CE88391, CE88392, CE88394)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	107	111	3.7				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	94	97	3.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	98	101	3.0				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	97	100	3.0				70 - 130	30
1,1-Dichloroethane	ND	5.0	92	93	1.1				70 - 130	30
1,1-Dichloroethene	ND	5.0	82	83	1.2				70 - 130	30

## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,1-Dichloropropene	ND	5.0	98	100	2.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	108	109	0.9				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	93	96	3.2				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	108	108	0.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	96	97	1.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	111	113	1.8				70 - 130	30
1,2-Dibromoethane	ND	5.0	101	105	3.9				70 - 130	30
1,2-Dichlorobenzene	ND	5.0	96	97	1.0				70 - 130	30
1,2-Dichloroethane	ND	5.0	100	101	1.0				70 - 130	30
1,2-Dichloropropane	ND	5.0	96	98	2.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	96	98	2.1				70 - 130	30
1,3-Dichlorobenzene	ND	5.0	100	102	2.0				70 - 130	30
1,3-Dichloropropane	ND	5.0	99	101	2.0				70 - 130	30
1,4-Dichlorobenzene	ND	5.0	97	98	1.0				70 - 130	30
1,4-dioxane	ND	100	105	100	4.9				40 - 160	30
2,2-Dichloropropane	ND	5.0	94	104	10.1				70 - 130	30
2-Chlorotoluene	ND	5.0	98	99	1.0				70 - 130	30
2-Hexanone	ND	25	99	98	1.0				40 - 160	30
2-Isopropyltoluene	ND	5.0	102	105	2.9				70 - 130	30
4-Chlorotoluene	ND	5.0	99	100	1.0				70 - 130	30
4-Methyl-2-pentanone	ND	25	103	106	2.9				40 - 160	30
Acetone	ND	10	73	79	7.9				40 - 160	30
Acrylonitrile	ND	5.0	92	99	7.3				70 - 130	30
Benzene	ND	1.0	97	100	3.0				70 - 130	30
Bromobenzene	ND	5.0	101	104	2.9				70 - 130	30
Bromochloromethane	ND	5.0	95	96	1.0				70 - 130	30
Bromodichloromethane	ND	5.0	103	105	1.9				70 - 130	30
Bromoform	ND	5.0	116	119	2.6				70 - 130	30
Bromomethane	ND	5.0	92	94	2.2				40 - 160	30
Carbon Disulfide	ND	5.0	87	89	2.3				70 - 130	30
Carbon tetrachloride	ND	5.0	94	101	7.2				70 - 130	30
Chlorobenzene	ND	5.0	99	101	2.0				70 - 130	30
Chloroethane	ND	5.0	90	91	1.1				70 - 130	30
Chloroform	ND	5.0	92	95	3.2				70 - 130	30
Chloromethane	ND	5.0	89	91	2.2				40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	91	94	3.2				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	99	103	4.0				70 - 130	30
Dibromochloromethane	ND	3.0	111	114	2.7				70 - 130	30
Dibromomethane	ND	5.0	96	100	4.1				70 - 130	30
Dichlorodifluoromethane	ND	5.0	98	98	0.0				40 - 160	30
Diethyl ether	ND	5.0	82	84	2.4				70 - 130	30
Di-isopropyl ether	ND	5.0	96	98	2.1				70 - 130	30
Ethyl tert-butyl ether	ND	5.0	95	98	3.1				70 - 130	30
Ethylbenzene	ND	1.0	101	104	2.9				70 - 130	30
Hexachlorobutadiene	ND	5.0	110	112	1.8				70 - 130	30
Isopropylbenzene	ND	1.0	98	101	3.0				70 - 130	30
m&p-Xylene	ND	2.0	100	103	3.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	90	89	1.1				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	79	81	2.5				70 - 130	30
Methylene chloride	ND	5.0	71	73	2.8				70 - 130	30
Naphthalene	ND	5.0	103	106	2.9				70 - 130	30
n-Butylbenzene	ND	1.0	99	100	1.0				70 - 130	30
n-Propylbenzene	ND	1.0	98	100	2.0				70 - 130	30

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	2.0	102	105	2.9				70 - 130	30
p-Isopropyltoluene	ND	1.0	99	101	2.0				70 - 130	30
sec-Butylbenzene	ND	1.0	104	106	1.9				70 - 130	30
Styrene	ND	5.0	102	104	1.9				70 - 130	30
tert-amyl methyl ether	ND	5.0	102	104	1.9				70 - 130	30
tert-Butylbenzene	ND	1.0	98	100	2.0				70 - 130	30
Tetrachloroethene	ND	5.0	105	107	1.9				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	89	93	4.4				70 - 130	30
Toluene	ND	1.0	99	102	3.0				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	81	84	3.6				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	100	103	3.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	107	110	2.8				70 - 130	30
Trichloroethene	ND	5.0	100	101	1.0				70 - 130	30
Trichlorofluoromethane	ND	5.0	95	96	1.0				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	88	88	0.0				70 - 130	30
Vinyl chloride	ND	5.0	82	85	3.6				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	99	100	1.0				70 - 130	30
% Bromofluorobenzene	100	%	101	102	1.0				70 - 130	30
% Dibromofluoromethane	97	%	101	104	2.9				70 - 130	30
% Toluene-d8	101	%	99	100	1.0				70 - 130	30

Comment:

The Low Level MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 511008 (ug/kg), QC Sample No: CE89315 (CE88399, CE88404, CE88405, CE88406, CE88407, CE88412)

## Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	98	97	1.0				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	92	89	3.3				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	90	91	1.1				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	92	91	1.1				70 - 130	30
1,1-Dichloroethane	ND	5.0	90	89	1.1				70 - 130	30
1,1-Dichloroethene	ND	5.0	98	93	5.2				70 - 130	30
1,1-Dichloropropene	ND	5.0	92	81	12.7				70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	96	95	1.0				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	81	81	0.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	96	95	1.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	92	90	2.2				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	88	91	3.4				70 - 130	30
1,2-Dibromoethane	ND	5.0	91	92	1.1				70 - 130	30
1,2-Dichlorobenzene	ND	5.0	89	88	1.1				70 - 130	30
1,2-Dichloroethane	ND	5.0	91	89	2.2				70 - 130	30
1,2-Dichloropropane	ND	5.0	89	89	0.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	93	91	2.2				70 - 130	30
1,3-Dichlorobenzene	ND	5.0	90	88	2.2				70 - 130	30
1,3-Dichloropropane	ND	5.0	89	89	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	5.0	88	86	2.3				70 - 130	30
1,4-dioxane	ND	100	99	93	6.3				40 - 160	30
2,2-Dichloropropane	ND	5.0	92	93	1.1				70 - 130	30
2-Chlorotoluene	ND	5.0	91	89	2.2				70 - 130	30
2-Hexanone	ND	25	80	84	4.9				40 - 160	30
2-Isopropyltoluene	ND	5.0	101	99	2.0				70 - 130	30
4-Chlorotoluene	ND	5.0	91	88	3.4				70 - 130	30
4-Methyl-2-pentanone	ND	25	88	90	2.2				40 - 160	30



## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Acetone	ND	10	70	70	0.0				40 - 160	30
Acrylonitrile	ND	5.0	91	91	0.0				70 - 130	30
Benzene	ND	1.0	94	91	3.2				70 - 130	30
Bromobenzene	ND	5.0	90	89	1.1				70 - 130	30
Bromochloromethane	ND	5.0	93	94	1.1				70 - 130	30
Bromodichloromethane	ND	5.0	94	93	1.1				70 - 130	30
Bromoform	ND	5.0	96	99	3.1				70 - 130	30
Bromomethane	ND	5.0	106	105	0.9				40 - 160	30
Carbon Disulfide	ND	5.0	101	98	3.0				70 - 130	30
Carbon tetrachloride	ND	5.0	95	93	2.1				70 - 130	30
Chlorobenzene	ND	5.0	92	90	2.2				70 - 130	30
Chloroethane	ND	5.0	106	103	2.9				70 - 130	30
Chloroform	ND	5.0	90	89	1.1				70 - 130	30
Chloromethane	ND	5.0	87	84	3.5				40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	92	92	0.0				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	94	94	0.0				70 - 130	30
Dibromochloromethane	ND	3.0	96	98	2.1				70 - 130	30
Dibromomethane	ND	5.0	90	91	1.1				70 - 130	30
Dichlorodifluoromethane	ND	5.0	93	87	6.7				40 - 160	30
Diethyl ether	ND	5.0	90	92	2.2				70 - 130	30
Di-isopropyl ether	ND	5.0	97	96	1.0				70 - 130	30
Ethyl tert-butyl ether	ND	5.0	97	97	0.0				70 - 130	30
Ethylbenzene	ND	1.0	93	91	2.2				70 - 130	30
Hexachlorobutadiene	ND	5.0	99	95	4.1				70 - 130	30
Isopropylbenzene	ND	1.0	94	90	4.3				70 - 130	30
m&p-Xylene	ND	2.0	93	90	3.3				70 - 130	30
Methyl ethyl ketone	ND	5.0	76	68	11.1				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	94	94	0.0				70 - 130	30
Methylene chloride	ND	5.0	85	83	2.4				70 - 130	30
Naphthalene	ND	5.0	103	103	0.0				70 - 130	30
n-Butylbenzene	ND	1.0	95	90	5.4				70 - 130	30
n-Propylbenzene	ND	1.0	92	90	2.2				70 - 130	30
o-Xylene	ND	2.0	95	94	1.1				70 - 130	30
p-Isopropyltoluene	ND	1.0	96	93	3.2				70 - 130	30
sec-Butylbenzene	ND	1.0	100	97	3.0				70 - 130	30
Styrene	ND	5.0	95	94	1.1				70 - 130	30
tert-amyl methyl ether	ND	5.0	102	101	1.0				70 - 130	30
tert-Butylbenzene	ND	1.0	95	92	3.2				70 - 130	30
Tetrachloroethene	ND	5.0	97	93	4.2				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	81	85	4.8				70 - 130	30
Toluene	ND	1.0	94	92	2.2				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	96	95	1.0				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	95	94	1.1				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	105	104	1.0				70 - 130	30
Trichloroethene	ND	5.0	95	92	3.2				70 - 130	30
Trichlorofluoromethane	ND	5.0	102	100	2.0				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	106	101	4.8				70 - 130	30
Vinyl chloride	ND	5.0	88	87	1.1				70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	99	99	0.0				70 - 130	30
% Bromofluorobenzene	97	%	100	102	2.0				70 - 130	30
% Dibromofluoromethane	99	%	100	100	0.0				70 - 130	30
% Toluene-d8	98	%	99	99	0.0				70 - 130	30

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:										
The Low Level MS/MSD are not reported for this batch.										
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.										
QA/QC Batch 511518 (ug/kg), QC Sample No: CE90314 (CE88397)										
<u>Volatiles - Soil (Low Level)</u>										
1,1,1,2-Tetrachloroethane	ND	5.0	105	102	2.9				70 - 130	30
1,1,1-Trichloroethane	ND	5.0	94	92	2.2				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	102	101	1.0				70 - 130	30
1,1,2-Trichloroethane	ND	5.0	99	99	0.0				70 - 130	30
1,1-Dichloroethane	ND	5.0	96	93	3.2				70 - 130	30
1,1-Dichloroethene	ND	5.0	101	99	2.0				70 - 130	30
1,1-Dichloropropene	ND	5.0	100	97	3.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	99	101	2.0				70 - 130	30
1,2,3-Trichloropropane	ND	5.0	99	104	4.9				70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	98	97	1.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	103	100	3.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	98	100	2.0				70 - 130	30
1,2-Dibromoethane	ND	5.0	101	100	1.0				70 - 130	30
1,2-Dichlorobenzene	ND	5.0	102	99	3.0				70 - 130	30
1,2-Dichloroethane	ND	5.0	96	96	0.0				70 - 130	30
1,2-Dichloropropane	ND	5.0	103	102	1.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	102	98	4.0				70 - 130	30
1,3-Dichlorobenzene	ND	5.0	102	99	3.0				70 - 130	30
1,3-Dichloropropane	ND	5.0	99	99	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	5.0	99	97	2.0				70 - 130	30
1,4-dioxane	ND	100	95	100	5.1				40 - 160	30
2,2-Dichloropropane	ND	5.0	97	93	4.2				70 - 130	30
2-Chlorotoluene	ND	5.0	105	102	2.9				70 - 130	30
2-Hexanone	ND	25	79	82	3.7				40 - 160	30
2-Isopropyltoluene	ND	5.0	106	102	3.8				70 - 130	30
4-Chlorotoluene	ND	5.0	101	97	4.0				70 - 130	30
4-Methyl-2-pentanone	ND	25	86	88	2.3				40 - 160	30
Acetone	ND	10	71	74	4.1				40 - 160	30
Acrylonitrile	ND	5.0	86	92	6.7				70 - 130	30
Benzene	ND	1.0	102	100	2.0				70 - 130	30
Bromobenzene	ND	5.0	104	101	2.9				70 - 130	30
Bromochloromethane	ND	5.0	98	97	1.0				70 - 130	30
Bromodichloromethane	ND	5.0	104	102	1.9				70 - 130	30
Bromoform	ND	5.0	103	104	1.0				70 - 130	30
Bromomethane	ND	5.0	94	90	4.3				40 - 160	30
Carbon Disulfide	ND	5.0	101	99	2.0				70 - 130	30
Carbon tetrachloride	ND	5.0	98	96	2.1				70 - 130	30
Chlorobenzene	ND	5.0	102	101	1.0				70 - 130	30
Chloroethane	ND	5.0	92	87	5.6				70 - 130	30
Chloroform	ND	5.0	92	91	1.1				70 - 130	30
Chloromethane	ND	5.0	84	81	3.6				40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	97	98	1.0				70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	103	101	2.0				70 - 130	30
Dibromochloromethane	ND	3.0	108	107	0.9				70 - 130	30
Dibromomethane	ND	5.0	97	99	2.0				70 - 130	30
Dichlorodifluoromethane	ND	5.0	84	81	3.6				40 - 160	30
Diethyl ether	ND	5.0	89	92	3.3				70 - 130	30

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Di-isopropyl ether	ND	5.0	89	89	0.0				70 - 130	30
Ethyl tert-butyl ether	ND	5.0	91	92	1.1				70 - 130	30
Ethylbenzene	ND	1.0	103	101	2.0				70 - 130	30
Hexachlorobutadiene	ND	5.0	108	105	2.8				70 - 130	30
Isopropylbenzene	ND	1.0	107	102	4.8				70 - 130	30
m&p-Xylene	ND	2.0	102	100	2.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	77	79	2.6				40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	91	93	2.2				70 - 130	30
Methylene chloride	ND	5.0	78	68	13.7				70 - 130	30
Naphthalene	ND	5.0	103	105	1.9				70 - 130	30
n-Butylbenzene	ND	1.0	103	100	3.0				70 - 130	30
n-Propylbenzene	ND	1.0	105	101	3.9				70 - 130	30
o-Xylene	ND	2.0	106	103	2.9				70 - 130	30
p-Isopropyltoluene	ND	1.0	106	102	3.8				70 - 130	30
sec-Butylbenzene	ND	1.0	111	108	2.7				70 - 130	30
Styrene	ND	5.0	101	100	1.0				70 - 130	30
tert-amyl methyl ether	ND	5.0	94	96	2.1				70 - 130	30
tert-Butylbenzene	ND	1.0	107	102	4.8				70 - 130	30
Tetrachloroethene	ND	5.0	104	101	2.9				70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	83	86	3.6				70 - 130	30
Toluene	ND	1.0	104	103	1.0				70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	102	100	2.0				70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	101	100	1.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	103	102	1.0				70 - 130	30
Trichloroethene	ND	5.0	104	102	1.9				70 - 130	30
Trichlorofluoromethane	ND	5.0	90	87	3.4				70 - 130	30
Trichlorotrifluoroethane	ND	5.0	98	97	1.0				70 - 130	30
Vinyl chloride	ND	5.0	84	81	3.6				70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	102	101	1.0				70 - 130	30
% Bromofluorobenzene	97	%	98	99	1.0				70 - 130	30
% Dibromofluoromethane	97	%	99	96	3.1				70 - 130	30
% Toluene-d8	94	%	102	103	1.0				70 - 130	30

Comment:

The Low Level MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 510815 (ug/L), QC Sample No: CE88409 (CE88409)

## Volatiles - Ground Water

1,1,1-Trichloroethane	ND	1.0	81	88	8.3	81	80	1.2	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	103	108	4.7	99	102	3.0	60 - 140	20
1,1,2-Trichloroethane	ND	1.0	85	91	6.8	84	83	1.2	70 - 130	20
1,1-Dichloroethane	ND	1.0	84	91	8.0	83	83	0.0	70 - 130	20
1,1-Dichloroethene	ND	1.0	81	89	9.4	84	83	1.2	50 - 150	20
1,2-Dichlorobenzene	ND	1.0	97	105	7.9	94	96	2.1	65 - 135	20
1,2-Dichloroethane	ND	1.0	83	90	8.1	83	82	1.2	70 - 130	20
1,2-Dichloropropane	ND	1.0	87	95	8.8	86	84	2.4	35 - 165	20
1,3-Dichlorobenzene	ND	1.0	100	109	8.6	98	99	1.0	70 - 130	20
1,4-Dichlorobenzene	ND	1.0	98	106	7.8	96	96	0.0	65 - 135	20
Benzene	ND	0.70	90	98	8.5	88	87	1.1	65 - 135	20
Bromodichloromethane	ND	0.50	87	94	7.7	86	85	1.2	65 - 135	20
Bromoform	ND	1.0	98	106	7.8	95	96	1.0	70 - 130	20
Bromomethane	ND	1.0	101	116	13.8	92	101	9.3	15 - 185	20
Carbon tetrachloride	ND	1.0	83	89	7.0	84	83	1.2	70 - 130	20

# QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chlorobenzene	ND	1.0	97	104	7.0	95	94	1.1	65 - 135	20
Chloroethane	ND	1.0	89	97	8.6	93	94	1.1	40 - 160	20
Chloroform	ND	1.0	83	88	5.8	83	81	2.4	70 - 135	20
Chloromethane	ND	1.0	90	96	6.5	89	87	2.3	10 - 200	20
cis-1,2-Dichloroethene	ND	1.0	86	94	8.9	83	83	0.0	70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	88	95	7.7	85	85	0.0	25 - 175	20
Dibromochloromethane	ND	0.50	97	102	5.0	92	93	1.1	70 - 135	20
Ethylbenzene	ND	1.0	98	108	9.7	97	95	2.1	60 - 140	20
m&p-Xylene	ND	1.0	102	111	8.5	100	99	1.0	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	78	82	5.0	75	77	2.6	70 - 130	30
Methylene chloride	ND	1.0	77	85	9.9	83	80	3.7	60 - 140	20
o-Xylene	ND	1.0	100	110	9.5	97	96	1.0	70 - 130	30
Tetrachloroethene	ND	1.0	87	97	10.9	88	86	2.3	70 - 130	20
Toluene	ND	1.0	91	100	9.4	91	89	2.2	70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	81	87	7.1	82	79	3.7	70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	86	93	7.8	85	85	0.0	50 - 150	20
Trichloroethene	ND	1.0	88	95	7.7	86	85	1.2	65 - 135	20
Trichlorofluoromethane	ND	1.0	87	93	6.7	94	92	2.2	50 - 150	20
Vinyl chloride	ND	1.0	86	96	11.0	91	91	0.0	10 - 195	20
% 1,2-dichlorobenzene-d4	100	%	98	99	1.0	99	101	2.0	70 - 130	30
% Bromofluorobenzene	91	%	98	98	0.0	97	97	0.0	70 - 130	30
% Dibromofluoromethane	101	%	100	99	1.0	102	103	1.0	70 - 130	30
% Toluene-d8	103	%	102	103	1.0	103	102	1.0	70 - 130	30

Comment:

A blank MS/MSD was analyzed with this batch.

QA/QC Batch 510484 (mg/Kg), QC Sample No: CE86102 (CE88395 (50X) , CE88402 (50X) , CE88403 (50X) )

## Volatile Petroleum Hydrocarbons - Soil

Benzene	ND	0.25	91	92	1.1	93	93	0.0	70 - 130	30
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.0	105	105	0.0	107	107	0.0	70 - 130	30
C9-C10 Aromatic Hydrocarbons *1	ND	1.7	99	100	1.0	100	101	1.0	70 - 130	30
C9-C12 Aliphatic Hydrocarbons *1,	ND	5.0	103	106	2.9	113	113	0.0	70 - 130	30
Ethyl Benzene	ND	0.25	96	97	1.0	98	99	1.0	70 - 130	30
m,p-Xylenes	ND	0.25	98	98	0.0	99	100	1.0	70 - 130	30
MTBE	ND	0.050	93	92	1.1	93	94	1.1	70 - 130	30
Naphthalene	ND	0.25	88	88	0.0	86	87	1.2	70 - 130	30
o-Xylene	ND	0.25	95	95	0.0	96	97	1.0	70 - 130	30
Toluene	ND	0.25	97	97	0.0	99	99	0.0	70 - 130	30
Unadjusted C5-C8 Aliphatics (*1)	ND	5.0	105	105	0.0	107	107	0.0	70 - 130	30
Unadjusted C9-C12 Aliphatics (*1)	ND	5.0	103	106	2.9	113	113	0.0	70 - 130	30
% 2,5-Dibromotoluene (PID)	74	%	91	86	5.6	91	96	5.3	70 - 130	30

QA/QC Batch 511007 (mg/Kg), QC Sample No: CE89612 (CE88391 (50X) , CE88392 (50X) , CE88393 (50X) , CE88394 (50X) , CE88396 (50X) , CE88397 (50X) , CE88398 (50X) , CE88399 (50X) , CE88400 (50X) , CE88401 (50X) , CE88404 (50X) , CE88405 (50X) , CE88406 (50X) , CE88407 (50X) , CE88408 (50X) , CE88410 (50X) , CE88411 (50X) , CE88412 (50X) )

## Volatile Petroleum Hydrocarbons - Soil

Benzene	ND	0.25	88	90	2.2	86	83	3.6	70 - 130	30
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.0	103	106	2.9	102	98	4.0	70 - 130	30
C9-C10 Aromatic Hydrocarbons *1	ND	1.7	98	98	0.0	94	91	3.2	70 - 130	30
C9-C12 Aliphatic Hydrocarbons *1,	ND	5.0	106	108	1.9	106	107	0.9	70 - 130	30
Ethyl Benzene	ND	0.25	95	95	0.0	91	89	2.2	70 - 130	30
m,p-Xylenes	ND	0.25	96	96	0.0	93	90	3.3	70 - 130	30
MTBE	ND	0.050	89	91	2.2	87	86	1.2	70 - 130	30
Naphthalene	ND	0.25	88	86	2.3	82	82	0.0	70 - 130	30

## QA/QC Data

SDG I.D.: GCE88391

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
o-Xylene	ND	0.25	93	93	0.0	90	88	2.2	70 - 130	30
Toluene	ND	0.25	95	95	0.0	91	89	2.2	70 - 130	30
Unadjusted C5-C8 Aliphatics (*1)	ND	5.0	103	106	2.9	102	98	4.0	70 - 130	30
Unadjusted C9-C12 Aliphatics (*1)	ND	5.0	106	108	1.9	106	107	0.9	70 - 130	30
% 2,5-Dibromotoluene (PID)	101	%	103	92	11.3	95	99	4.1	70 - 130	30

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director

December 24, 2019

Tuesday, December 24, 2019

Criteria: MA: GW1, S1

State: MA

## Sample Criteria Exceedances Report

GCE88391 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE88393	\$8260MAR	Bromoform	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,1,2,2-Tetrachloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	5	5	ug/Kg
CE88393	\$8260MAR	1,1,2-Trichloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,2-Dibromoethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,2-Dichloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,2-Dichloropropane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,1,1,2-Tetrachloroethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	Bromodichloromethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	cis-1,2-Dichloroethene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	Methylene chloride	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	260	100	100	ug/Kg
CE88393	\$8260MAR	Dibromochloromethane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	5	5	ug/Kg
CE88393	\$8260MAR	trans-1,3-Dichloropropene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	10	10	ug/Kg
CE88393	\$8260MAR	Methyl t-butyl ether (MTBE)	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	cis-1,3-Dichloropropene	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	110	10	10	ug/Kg
CE88393	\$8260MAR	1,1,1,2-Tetrachloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,1,2,2-Tetrachloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	5	5	ug/Kg
CE88393	\$8260MAR	1,1,2-Trichloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	Methylene chloride	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	260	100	100	ug/Kg
CE88393	\$8260MAR	Bromodichloromethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,2-Dichloroethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	Methyl t-butyl ether (MTBE)	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,2-Dichloropropane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	Dibromochloromethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	5	5	ug/Kg
CE88393	\$8260MAR	Bromoform	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$8260MAR	1,2-Dibromoethane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	110	100	100	ug/Kg
CE88393	\$MCPADD-SM	1,4-Dioxane	MA / CMR 310.40.1600 / S1 (mg/kg)	ND	5300	200	200	ug/Kg
CE88393	\$MCPADD-SM	1,4-Dioxane	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-1	ND	5300	200	200	ug/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

December 24, 2019

SDG I.D.: GCE88391

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

### **SVOA Narration**

**CHEM05 12/17/19-1:** CE88395, CE88402, CE88403

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.096 (0.1), Hexachlorobenzene 0.094 (0.1)

The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.093 (0.1)

The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### **VOA Narration**

**CHEM03 12/16/19-2:** CE88393

The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 28% (20%), Chloroethane 22% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Bromoform 0.086 (0.1), Tetrachloroethene 0.156 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

**CHEM03 12/18/19-1:** CE88391, CE88392, CE88394

The following Initial Calibration compounds did not meet RSD% criteria: Bromoform 28% (20%), Chloroethane 22% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Bromoform 0.086 (0.1), Tetrachloroethene 0.156 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

**CHEM14 12/16/19-2:** CE88392

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 21% (20%), trans-1,4-dichloro-2-butene 21% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

**CHEM14 12/20/19-1:** CE88397



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## Analysis Comments

December 24, 2019

SDG I.D.: GCE88391

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 21% (20%), Bromoform 22% (20%), trans-1,4-dichloro-2-butene 21% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.093 (0.1), Bromoform 0.092 (0.1), Tetrachloroethene 0.193 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### **CHEM31 12/16/19-2:** CE88395, CE88402, CE88403

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 31% (20%), Chloroethane 21% (20%), Naphthalene 28% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.071 (0.1), Bromoform 0.091 (0.1), Tetrachloroethene 0.160 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### **CHEM31 12/17/19-1:** CE88396, CE88398, CE88400, CE88401

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 31% (20%), Chloroethane 21% (20%), Naphthalene 28% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.071 (0.1), Bromoform 0.091 (0.1), Tetrachloroethene 0.160 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### **CHEM31 12/18/19-1:** CE88399, CE88404, CE88405, CE88406, CE88407, CE88412

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 31% (20%), Chloroethane 21% (20%), Naphthalene 28% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.071 (0.1), Bromoform 0.091 (0.1), Tetrachloroethene 0.160 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

### **CHEM31 12/19/19-1:** CE88408, CE88410, CE88411





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Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

December 24, 2019

SDG I.D.: GCE88391

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The following Initial Calibration compounds did not meet RSD% criteria: Acetone 31% (20%), Chloroethane 21% (20%), Naphthalene 28% (20%)  
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.  
The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.071 (0.1), Bromoform 0.091 (0.1),  
Tetrachloroethene 0.160 (0.2)  
The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.





## Bobbi Aloisa

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**From:** Bobbi Aloisa  
**Sent:** Tuesday, December 17, 2019 5:15 PM  
**To:** [mberger@cleanproperties.com](mailto:mberger@cleanproperties.com)  
**Cc:** Bobbi Aloisa  
**Subject:** 624  
**Attachments:** GCE88391-ChainofCustody-1.pdf

Hi Marcia

On the attached chain, on one sample, 88409 (location 1)

We can't report the following compounds on the attached chain because we did not receive an "as is" vial in addition to the HCL vials on the attached chain for samples that are being requested for 624 VOC's. We need 2 "as is" vials and 3 "hcl" vials when running samples for method 624. If these compounds are not constituents of concern then it might not be a problem.

624 Analyses:

Acrylonitrile, 2-Chloroethyl vinyl ether and Acrolein could not be analyzed due to HCL preserved vial, these compounds can only be analyzed on an AS IS vial

Bobbi

Bobbi Aloisa  
Vice President  
Director of Client Services  
Phoenix Environmental Laboratories  
587 East Middle Turnpike  
Manchester, CT 06040  
Ph: 860-645-8728

## **CHAIN OF CUSTODY RECORD: SOILS**



587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: [info@phoenixlabs.com](mailto:info@phoenixlabs.com) Fax (860) 645-0823  
**Client Services (860) 545-8726**

Coolant:	IPK	<input checked="" type="checkbox"/> ICE	<input type="checkbox"/> No	<input type="checkbox"/> No
Cooler:		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> No

**Data Delivery/Contact Options:**

**Fax:** \_\_\_\_\_  
**Phone:** 800-977-1982  
**Email:** data@cleanproperties.com

Customer:	Clean Properties, Inc.	Project:	515 Somerville Ave Somerville, MA
Address:	111 Boston Post Road Suite 214	Report to:	mberger@cleanproperties.com
	Sudbury, MA 01776	Invoice to:	knackie@cleanproperties.com
		QUOTE #	

**THIS SECTION MUST BE COMPLETED WITH BOTTLE QUANTITIES**

Client Sample - Information - Identification				Analysis Request	
PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	
803291	Loam Stockpile 1	S	12/13/2019	1:30 PM	
803292	Loam Stockpile 2	S	12/13/2019	1:30 PM	
803293	Stockpile West 2	S	12/13/2019	1:30 PM	
803294	Stockpile East 2	S	12/13/2019	1:30 PM	
803295	Location 1 12-13 ft	S	12/13/2019	12:10 PM	
803296	Location 2 0-6 ft	S	12/13/2019	3:00 PM	
803297	Location 2B 12 ft	S	12/13/2019	3:00 PM	
803298	Location 3 0-6 ft	S	12/13/2019	AM	
803299	Location 3B 12 ft	S	12/13/2019	AM	
803300	Location 8 0-6 ft	S	12/13/2019	AM	
803401	Location 8B 12 ft	S	12/13/2019	AM	
803402	Location 13 0-6 ft	S	12/13/2019	8:15 AM	

Relinquished by: <i>M. S. [Signature]</i>	Accepted by: <i>[Signature]</i>	Date: <i>12/16/19</i>	Time: <i>14:50</i>
Comments, Special Requirements or Regulations:		Turnaround: <input type="checkbox"/> 1 Day* <input type="checkbox"/> 2 Days* <input type="checkbox"/> 3 Days* <input type="checkbox"/> Standard 5 day <input type="checkbox"/> Other	



CHAIN OF CUSTODY RECORD: SOILS

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: info@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-8726

Coolant: ☒ Yes ☐ No  
PK ☒ ICE ☐ No  
Temp: 32 °C Pg. 1 of 1  
Data Delivery/Contact Options:  
Fax: ☐ Phone: ☒ Email: ☒  
800-977-1982  
data@cleanproperties.com

Customer: Clean Properties, Inc.  
Address: 111 Boston Post Road Suite 214  
Sudbury, MA 01776  
Project: 515 Somerville Ave Somerville, MA  
Report to: mberger@cleanproperties.com  
Invoice to: kmackler@cleanproperties.com  
QUOTE #

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification				Analysis Request											
PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Matrix Code	SW=Surface Water	WW=Waste Water	SL=Sludge	S=Soil	SD=Solid	W=Wipe Oil-Oil	Blank	Leak	Other	Notes
88403	Location 13 6-12 ft	S	12/13/2019	8:15 AM	1	1	1	1	1	1	1	1	1	1	
88404	Location 14 0-6 ft	S	12/13/2019	9:00 AM	1	1	1	1	1	1	1	1	1	1	
88405	Location 14 6-12 ft	S	12/13/2019	9:00 AM	1	1	1	1	1	1	1	1	1	1	
88406	Location 15 0-3 ft	S	12/13/2019	9:30 AM	1	1	1	1	1	1	1	1	1	1	
88407	Location 15 3-6 ft	S	12/13/2019	9:30 AM	1	1	1	1	1	1	1	1	1	1	
88408	Location 15 6-12 ft	S	12/13/2019	9:30 AM	1	1	1	1	1	1	1	1	1	1	
88409	Location 1	GW	12/13/2019	12:10 PM	1	1	1	1	1	1	1	1	1	1	
88410	Overlying AUL 1	S	12/13/2019	PM	1	1	1	1	1	1	1	1	1	1	
88411	Loc-10 0-6	S	12-13	am	1	1	1	1	1	1	1	1	1	1	
88412	Loc-10 6-12	S	12-13	am	1	1	1	1	1	1	1	1	1	1	

Relinquished by: Mary Serrano Accepted by: [Signature]  
Date: 12-16-19 Time: 14:50  
Date: 12/16/19 Time: 14:31  
Turnaround: ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ Standard 5 day ☐ Other  
Comments, Special Requirements or Regulations:  
State where samples were collected: MA  
Data Format: ☒ Excel ☐ PDF ☐ GIS/Key ☐ EQUIS ☐ Other  
Data Package: ☐ MCP Certification ☐ GW-1 ☐ GW-2 ☐ GW-3 ☐ S-1 ☐ S-2 ☐ S-3 ☐ MWRA eSMART ☐ Other  
RCP Cert ☐ GWP Protection ☐ SW Protection ☐ GA Mobility ☐ GB Mobility ☐ Residential DEC ☐ IC DEC ☐ Other  
Direct Exposure (Residential) ☐ GW ☐ Other  
RI ☐ Direct Exposure (Residential) ☐ GW ☐ Other  
CT ☐ RCP Cert ☐ GWP Protection ☐ SW Protection ☐ GA Mobility ☐ GB Mobility ☐ Residential DEC ☐ IC DEC ☐ Other  
MA ☐ MCP Certification ☐ GW-1 ☐ GW-2 ☐ GW-3 ☐ S-1 ☐ S-2 ☐ S-3 ☐ MWRA eSMART ☐ Other  
Data Package ☐ Tier II Checklist ☐ Full Data Package\* ☐ Phoenix Std Report ☐ Other  
\* SURCHARGE APPLIES



Wednesday, December 12, 2018

Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

Project ID: 5737-SOMERVILLE  
Sample ID#s: CC07212 - CC07243

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis/Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
UT Lab Registration #CT00007  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
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Tel. (860) 645-1102 Fax (860) 645-0823



## SDG Comments

December 12, 2018

SDG I.D.: GCC07212

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Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.





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## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07212

Project ID: 5737-SOMERVILLE  
Client ID: CP 2 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.42	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	4.85	0.84	mg/Kg	1	12/06/18	EK	SW6010C
Barium	23.8	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.40	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.42	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	13.4	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	10.0	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Lead	78.7	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.2	4.2	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.7	1.7	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	0.18	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.8	3.8	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	22.9	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	42.8	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	83		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	111	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.84	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	BB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	80	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	80	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	67		%	2	12/06/18	AW	30 - 150 %
% TCMX	64		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	82		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	21	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	21	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	210	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.6	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	26	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	8.6	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	8.6	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	8.6	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	8.6	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	8.6	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	96		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	93		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	86	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzoic acid	ND	780	ug/Kg	1	12/05/18	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	62		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorobiphenyl	65		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorophenol	54		%	1	12/05/18	WB	30 - 130 %
% Nitrobenzene-d5	52		%	1	12/05/18	WB	30 - 130 %
% Phenol-d5	61		%	1	12/05/18	WB	30 - 130 %
% Terphenyl-d14	64		%	1	12/05/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date      Time

11/29/18  
12/04/18      17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07213

Project ID: 5737-SOMERVILLE  
Client ID: CP 2 - 11 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.41	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	4.23	0.82	mg/Kg	1	12/06/18	EK	SW6010C
Barium	13.8	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.33	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.41	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	11.7	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	9.07	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Lead	4.36	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.1	4.1	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.7	3.7	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	21.9	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	18.1	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	86		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	83	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.86	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	78	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	58		%	2	12/06/18	AW	30 - 150 %
% TCMX	55		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	85		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	230	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.7	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	27	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	97		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	93		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	91	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitroaniline	ND	620	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Benzoic acid	ND	770	ug/Kg	1	12/05/18	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
Phenanthrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/05/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/05/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	63		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorobiphenyl	67		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorophenol	61		%	1	12/05/18	WB	30 - 130 %
% Nitrobenzene-d5	58		%	1	12/05/18	WB	30 - 130 %
% Phenol-d5	70		%	1	12/05/18	WB	30 - 130 %
% Terphenyl-d14	68		%	1	12/05/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07214

Project ID: 5737-SOMERVILLE  
Client ID: CP 3 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	3.30	0.76	mg/Kg	1	12/06/18	EK	SW6010C
Barium	27.1	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.35	0.30	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.38	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	17.7	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	0.06	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	11.6	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Lead	49.0	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.8	3.8	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.4	3.4	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	24.3	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	32.4	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	87		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	137	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	8.41	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	76	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	76	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	60		%	2	12/06/18	AW	30 - 150 %
% TCMX	65		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	57	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	80		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	28	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	3.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	33	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	95		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	110	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.6	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	750	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	380	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	340	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	71		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	60		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	59		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	70		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	69		%	1	12/06/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07215

Project ID: 5737-SOMERVILLE  
Client ID: CP 3 - 11 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.42	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	3.92	0.85	mg/Kg	1	12/06/18	EK	SW6010C
Barium	41.3	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.40	0.34	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.42	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	13.5	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	0.14	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	11.4	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Lead	90.0	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.2	4.2	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.7	1.7	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	0.13	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.8	3.8	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	28.0	0.42	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	47.5	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	83		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	245	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	8.47	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	79	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	79		%	2	12/06/18	AW	30 - 150 %
% TCMX	73		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	**	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	110	60	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	91		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	36	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	36	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	360	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	4.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	43	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	97		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	91		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	97		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	140	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	7.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	430	280	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	970	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	800	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	700	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	500	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	730	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	790	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	970	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	2000	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	580	280	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Phenanthrene	1800	280	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	1700	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	53		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	46		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	48		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	54		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/06/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

#### TPH Comment:

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07216

Project ID: 5737-SOMERVILLE  
Client ID: CP 4 - 10 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	< 0.77	0.77	mg/Kg	1	12/06/18	EK	SW6010C
Barium	11.2	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.31	0.31	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.39	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	8.90	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	7.87	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Lead	3.15	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.9	3.9	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.5	3.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	13.3	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	19.3	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	90		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	43	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.37	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	74	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	74	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	65		%	2	12/06/18	AW	30 - 150 %
% TCMX	68		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	85		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.2	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	27	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	27	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	270	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	3.2	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	32	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	95		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	97		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	110	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.4	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	740	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	60		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	61		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	53		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	51		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	59		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	61		%	1	12/06/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

11/29/18  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07217

Project ID: 5737-SOMERVILLE  
Client ID: CP 4 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	2.44	0.77	mg/Kg	1	12/06/18	EK	SW6010C
Barium	12.2	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.31	0.31	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.39	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	7.17	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	0.11	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	6.50	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Lead	13.0	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.9	3.9	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.5	3.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	12.7	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	24.4	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	91		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	137	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	5.12	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	73	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	73	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	118		%	2	12/06/18	AW	30 - 150 %
% TCMX	119		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	55	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	74		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	34	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	34	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	340	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	4.1	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	41	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	14	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	95		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	96		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	97		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	140	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	6.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	580	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	70		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	70		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	60		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	58		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	67		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	67		%	1	12/06/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07218

Project ID: 5737-SOMERVILLE  
Client ID: CP 5 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	5.25	0.78	mg/Kg	1	12/06/18	EK	SW6010C
Barium	270	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.37	0.31	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	3.58	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	15.9	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	0.89	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	10.6	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Lead	3020	39	mg/Kg	100	12/06/18	CPP	SW6010C
Antimony	< 3.9	3.9	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	9.78	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.5	3.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	24.7	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	557	7.8	mg/Kg	10	12/06/18	CPP	SW6010C
Percent Solid	80		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	304	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.88	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/06/18	BS/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/06/18	BS/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/06/18	BS/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	200	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	82	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	82	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	64		%	2	12/07/18	AW	30 - 150 %
% TCMX	51		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	310	mg/kg	5	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	310	mg/kg	5	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	310	mg/kg	5	12/06/18	JRB	SW8015D DRO
Kerosene	ND	310	mg/kg	5	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	310	mg/kg	5	12/06/18	JRB	SW8015D DRO
Other Oil	**	310	mg/kg	5	12/06/18	JRB	SW8015D DRO
Unidentified	1300	310	mg/kg	5	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	99		%	5	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	28	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	28	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	280	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	3.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	33	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	11	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	96		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	92		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	97		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	110	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	5.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	900	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	660	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	5900	290	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	780	290	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	12000	2900	ug/Kg	10	12/06/18	WB	SW8270D



Client ID: CP 5 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	38000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Benzidine	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	35000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	29000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Benzo(ghi)perylene	21000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	29000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Benzoic acid	ND	820	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	330	290	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	690	290	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	4600	410	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	38000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	5100	290	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	2600	290	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	68000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Fluorene	4500	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	23000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Isophorone	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	1900	290	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
Phenanthrene	57000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Phenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	55000	2900	ug/Kg	10	12/06/18	WB	SW8270D
Pyridine	ND	410	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	104		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	62		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	67		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	63		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	69		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/06/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

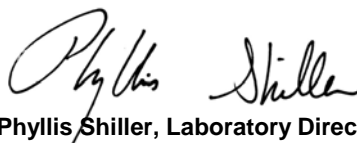
#### TPH Comment:

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C12 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07219

Project ID: 5737-SOMERVILLE  
Client ID: CP 5 - 11 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	2.27	0.80	mg/Kg	1	12/06/18	EK	SW6010C
Barium	12.7	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.32	0.32	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.40	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	14.2	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	13.8	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Lead	5.16	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.0	4.0	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.6	3.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	25.6	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	23.5	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	87		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	471	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.89	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/07/18	MB/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1221	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1232	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1242	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1248	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1254	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1260	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1262	ND	75	ug/Kg	2	12/10/18	AW	SW8082A
PCB-1268	ND	75	ug/Kg	2	12/10/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	68		%	2	12/10/18	AW	30 - 150 %
% TCMX	68		%	2	12/10/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	56	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	77		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	3.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	30	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	30	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	300	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	3.7	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	37	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	12	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	12	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	95		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	96		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	100		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	120	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	6.1	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitroaniline	ND	600	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Benzoic acid	ND	750	ug/Kg	1	12/05/18	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/05/18	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/05/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	94		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorobiphenyl	63		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorophenol	69		%	1	12/05/18	WB	30 - 130 %
% Nitrobenzene-d5	64		%	1	12/05/18	WB	30 - 130 %
% Phenol-d5	72		%	1	12/05/18	WB	30 - 130 %
% Terphenyl-d14	61		%	1	12/05/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

This report must not be reproduced except in full as defined by the attached chain of custody.



**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07220

Project ID: 5737-SOMERVILLE  
Client ID: CP 7 - 2 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<b><u>Volatiles</u></b>							
1,1,1,2-Tetrachloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
2,2-Dichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	20	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	20	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	200	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.4	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	24	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	8.0	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	8.0	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	8.0	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	8.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	8.0	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	102		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	86		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	95		%	1	12/05/18	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	97		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	80	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Field Extraction	Completed				11/29/18		SW5035A

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

11/29/18  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07221

Project ID: 5737-SOMERVILLE  
Client ID: CP 7 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.48	0.48	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	4.61	0.95	mg/Kg	1	12/06/18	EK	SW6010C
Barium	49.6	0.48	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.57	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.48	0.48	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	17.9	0.48	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	0.25	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	15.5	0.48	mg/Kg	1	12/06/18	EK	SW6010C
Lead	109	0.48	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.8	4.8	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.9	1.9	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 4.3	4.3	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	26.8	0.48	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	88.8	1.0	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	75		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	566	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.58	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	87	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	87	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	69		%	2	12/07/18	AW	30 - 150 %
% TCMX	69		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	66	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	84		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	4.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	36	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	36	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	360	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	4.4	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	44	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	97		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	93		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	150	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	7.3	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	700	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	390	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	420	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	400	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	350	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	380	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	880	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	450	310	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	660	310	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	310	310	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Phenanthrene	420	310	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	630	310	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	99		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	64		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	67		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	62		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	71		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	56		%	1	12/06/18	WB	30 - 130 %
Field Extraction	Completed				11/29/18		SW5035A



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18  
12/04/18

### Time

10:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07222

Project ID: 5737-SOMERVILLE  
Client ID: CP 11 - 3.5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Arsenic	3.72	0.74	mg/Kg	1	12/06/18	EK	SW6010C
Barium	11.5	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.40	0.30	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.37	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	13.7	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	8.81	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Lead	10.1	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.7	3.7	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/07/18	TH	SW6010C
Thallium	< 3.3	3.3	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/07/18	Q/Q	SW3010A
Vanadium	16.2	0.37	mg/Kg	1	12/06/18	EK	SW6010C
Zinc	14.0	0.7	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	95		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	31	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	5.71	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/06/18	Q	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	69	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	69	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	57		%	2	12/07/18	AW	30 - 150 %
% TCMX	54		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	51	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	75		%	1	12/06/18	JRB	50 - 150 %
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**Volatiles**

1,1,1,2-Tetrachloroethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.3	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,2-Dichloropropane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	19	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	19	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	190	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.3	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	7.7	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	7.7	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	7.7	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	7.7	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Trichlorotrifluoroethane	ND	7.7	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	95		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %
% Dibromofluoromethane	97		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	99		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	77	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	3.8	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
<b><u>Semivolatiles</u></b>							
1,2,4,5-Tetrachlorobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Dichlorobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
1,3-Dichlorobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
1,4-Dichlorobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dichlorophenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dimethylphenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrophenol	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
2,4-Dinitrotoluene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2,6-Dinitrotoluene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2-Chloronaphthalene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2-Chlorophenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylnaphthalene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitroaniline	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
2-Nitrophenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
3-Nitroaniline	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
4-Chloroaniline	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitroaniline	ND	550	ug/Kg	1	12/05/18	WB	SW8270D
4-Nitrophenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Acenaphthylene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Acetophenone	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Aniline	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Anthracene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benz(a)anthracene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Benzidine	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(a)pyrene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(b)fluoranthene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(ghi)perylene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Benzo(k)fluoranthene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Benzoic acid	ND	690	ug/Kg	1	12/05/18	WB	SW8270D
Benzyl butyl phthalate	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Carbazole	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Chrysene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Dibenzofuran	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Diethyl phthalate	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Dimethylphthalate	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-butylphthalate	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Di-n-octylphthalate	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Fluoranthene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Fluorene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorobutadiene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Hexachloroethane	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Isophorone	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Naphthalene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Nitrobenzene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodimethylamine	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Pentachloronitrobenzene	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Pentachlorophenol	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
Phenanthrene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Phenol	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Pyrene	ND	240	ug/Kg	1	12/05/18	WB	SW8270D
Pyridine	ND	340	ug/Kg	1	12/05/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	57		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorobiphenyl	40		%	1	12/05/18	WB	30 - 130 %
% 2-Fluorophenol	48		%	1	12/05/18	WB	30 - 130 %
% Nitrobenzene-d5	43		%	1	12/05/18	WB	30 - 130 %
% Phenol-d5	49		%	1	12/05/18	WB	30 - 130 %
% Terphenyl-d14	40		%	1	12/05/18	WB	30 - 130 %
Field Extraction	Completed				12/03/18		SW5035A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18 10:00  
12/04/18 17:20

### Time

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07223

Project ID: 5737-SOMERVILLE  
Client ID: CP 11 - 6.5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	89		%		12/04/18	AK	SW846-%Solid

### Volatiles

1,1,1,2-Tetrachloroethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	1.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
2,2-Dichloropropane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	15	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	150	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	1.8	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	18	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	6.0	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	6.0	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	6.0	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	6.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	6.0	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	96		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	94		%	1	12/05/18	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	91		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	60	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	3.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Field Extraction	Completed				12/03/18		SW5035A

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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Phyllis Shiller, Laboratory Director

December 12, 2018

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

12/03/18 10:00  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07224

Project ID: 5737-SOMERVILLE  
Client ID: CP 11 - 7.5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.45	0.45	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	2.25	0.90	mg/Kg	1	12/06/18	EK	SW6010C
Barium	9.28	0.45	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.36	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.45	0.45	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	9.00	0.45	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	9.03	0.45	mg/Kg	1	12/06/18	EK	SW6010C
Lead	7.72	0.45	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.5	4.5	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.8	1.8	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 4.1	4.1	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	15.7	0.45	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	29.1	0.9	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	73		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	406	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	5.65	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 7	7	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/06/18	MM/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	91	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	91	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	60		%	2	12/07/18	AW	30 - 150 %
% TCMX	59		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	63		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
1,2-Dichlorobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
1,3-Dichlorobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
1,4-Dichlorobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2,4-Dichlorophenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2,4-Dimethylphenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2,4-Dinitrophenol	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
2,4-Dinitrotoluene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2,6-Dinitrotoluene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2-Chloronaphthalene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2-Chlorophenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2-Methylnaphthalene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
2-Nitroaniline	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
2-Nitrophenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	450	ug/Kg	1	12/07/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
3-Nitroaniline	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
4-Chloroaniline	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
4-Nitroaniline	ND	720	ug/Kg	1	12/07/18	WB	SW8270D
4-Nitrophenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Acenaphthene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Acenaphthylene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Acetophenone	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Aniline	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
Anthracene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benz(a)anthracene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benzidine	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benzo(a)pyrene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benzo(b)fluoranthene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benzo(ghi)perylene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benzo(k)fluoranthene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Benzoic acid	ND	900	ug/Kg	1	12/07/18	WB	SW8270D
Benzyl butyl phthalate	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Carbazole	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
Chrysene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Dibenzofuran	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Diethyl phthalate	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Dimethylphthalate	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Di-n-butylphthalate	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
Di-n-octylphthalate	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Fluoranthene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Fluorene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Hexachlorobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Hexachlorobutadiene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Hexachloroethane	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Isophorone	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Naphthalene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Nitrobenzene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
N-Nitrosodimethylamine	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
Pentachloronitrobenzene	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
Pentachlorophenol	ND	450	ug/Kg	1	12/07/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Phenol	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Pyrene	ND	310	ug/Kg	1	12/07/18	WB	SW8270D
Pyridine	ND	450	ug/Kg	1	12/07/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	63		%	1	12/07/18	WB	30 - 130 %
% 2-Fluorobiphenyl	60		%	1	12/07/18	WB	30 - 130 %
% 2-Fluorophenol	58		%	1	12/07/18	WB	30 - 130 %
% Nitrobenzene-d5	55		%	1	12/07/18	WB	30 - 130 %
% Phenol-d5	68		%	1	12/07/18	WB	30 - 130 %
% Terphenyl-d14	60		%	1	12/07/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

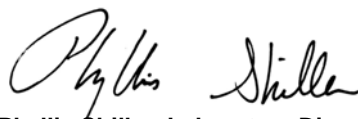
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18  
12/04/18

### Time

10:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07225

Project ID: 5737-SOMERVILLE  
Client ID: CP 12 - 3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	5.63	0.73	mg/Kg	1	12/06/18	EK	SW6010C
Barium	67.5	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.73	0.29	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	0.45	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	20.7	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	0.33	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	15.5	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Lead	160	3.6	mg/Kg	10	12/07/18	EK	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.3	3.3	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	32.4	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	101	0.7	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	82		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	215	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	5.62	1.00	pH Units	1	12/05/18 21:48	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	81	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	81	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	67		%	2	12/07/18	AW	30 - 150 %
% TCMX	66		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	60	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	106		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/06/18	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	630	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	790	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	89		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	64		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	58		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	65		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	51		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

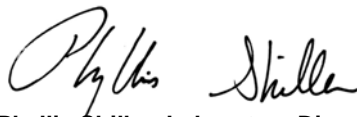
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
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Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

12/03/18 10:00  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07226

Project ID: 5737-SOMERVILLE  
Client ID: CP 12 - 7 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	0.89	0.79	mg/Kg	1	12/06/18	EK	SW6010C
Barium	15.1	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.32	0.32	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.40	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	8.64	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	9.01	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Lead	5.81	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.0	4.0	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.6	3.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	13.0	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	17.9	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	75		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	152	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.26	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	88	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	88	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	66		%	2	12/07/18	AW	30 - 150 %
% TCMX	65		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	65	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	69		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	440	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	700	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	870	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	105		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	73		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	65		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	71		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	63		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

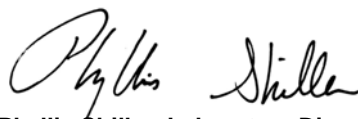
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18  
12/04/18

### Time

10:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07227

Project ID: 5737-SOMERVILLE  
Client ID: CP 13 - 3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	92		%		12/04/18	AK	SW846-%Solid

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.4	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
2,2-Dichloropropane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	20	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	20	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	200	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.4	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	24	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	7.9	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	7.9	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	7.9	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	7.9	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	7.9	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	94		%	1	12/05/18	JLI	70 - 130 %



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	96		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/05/18	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	79	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.0	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Field Extraction	Completed				12/03/18		SW5035A

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level


QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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Phyllis Shiller, Laboratory Director

December 12, 2018

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18  
12/04/18

### Time

10:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07228

Project ID: 5737-SOMERVILLE  
Client ID: CP 13 - 7 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	3.48	0.73	mg/Kg	1	12/06/18	EK	SW6010C
Barium	11.0	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.29	0.29	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.36	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	10.1	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	9.47	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Lead	3.76	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.3	3.3	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	17.4	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	15.9	0.7	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	93		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	71	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.60	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	BB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	70	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	70	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	68		%	2	12/07/18	AW	30 - 150 %
% TCMX	66		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	73		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	710	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	98		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	60		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	68		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	67		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	72		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	65		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

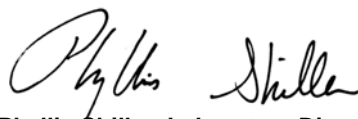
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18  
12/04/18

### Time

10:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07229

Project ID: 5737-SOMERVILLE  
Client ID: CP 13 - 9 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	2.84	0.79	mg/Kg	1	12/06/18	EK	SW6010C
Barium	16.9	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.32	0.32	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.40	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	11.5	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	10.9	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Lead	4.64	0.40	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.0	4.0	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.6	3.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	18.6	0.40	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	33.7	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	74		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	60	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.41	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 7	7	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1221	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1232	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1242	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1248	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1254	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1260	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1262	ND	89	ug/Kg	2	12/07/18	AW	SW8082A
PCB-1268	ND	89	ug/Kg	2	12/07/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	78		%	2	12/07/18	AW	30 - 150 %
% TCMX	76		%	2	12/07/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	67	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	88		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	440	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	700	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	880	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	440	ug/Kg	1	12/06/18	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	310	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	440	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	87		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	60		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	66		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	60		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	67		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	55		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

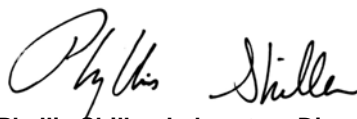
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18 10:00  
12/04/18 17:20

### Time

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07230

Project ID: 5737-SOMERVILLE  
Client ID: CP 14 - 5.5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.33	0.33	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	6.00	0.67	mg/Kg	1	12/06/18	EK	SW6010C
Barium	12.1	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.37	0.27	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	0.50	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	11.8	0.33	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	13.3	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Lead	8.42	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.3	3.3	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.3	1.3	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.0	3.0	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	24.6	0.33	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	72.9	0.7	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	90		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	82	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.42	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	72	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	66		%	2	12/06/18	AW	30 - 150 %
% TCMX	61		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	87		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	83		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	63		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	71		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	69		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	74		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	55		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

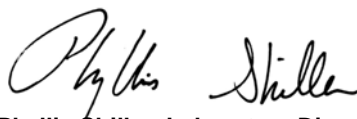
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



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Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

12/03/18 10:00  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07231

Project ID: 5737-SOMERVILLE  
Client ID: CP 14 - 9 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	2.82	0.78	mg/Kg	1	12/06/18	EK	SW6010C
Barium	10.3	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.31	0.31	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.39	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	11.1	0.39	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	8.97	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Lead	5.22	0.39	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.9	3.9	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.5	3.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	17.5	0.39	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	33.3	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	85		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	153	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.52	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	77	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	68		%	2	12/06/18	AW	30 - 150 %
% TCMX	68		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #4	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #6	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Kerosene	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Motor Oil	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Other Oil	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Unidentified	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	61		%	1	12/07/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	620	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	770	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	95		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	65		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	70		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	66		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	71		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	59		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

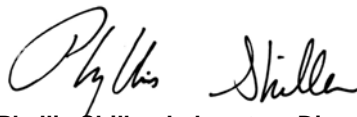
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

9:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07232

Project ID: 5737-SOMERVILLE  
Client ID: CP 1 - 6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	88		%		12/04/18	AK	SW846-%Solid

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
2,2-Dichloropropane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	230	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.7	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	27	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	9.1	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	95		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	12/05/18	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	93		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	97		%	1	12/05/18	JLI	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	91	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.5	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Field Extraction	Completed				11/29/18		SW5035A

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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Phyllis Shiller, Laboratory Director

December 12, 2018

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/29/18  
12/04/18

### Time

8:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07233

Project ID: 5737-SOMERVILLE  
Client ID: CP 1 - 10 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.41	0.41	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	3.12	0.83	mg/Kg	1	12/06/18	EK	SW6010C
Barium	22.6	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.37	0.33	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.41	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	14.7	0.41	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	11.0	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Lead	21.2	0.41	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 4.1	4.1	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.7	1.7	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.7	3.7	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	22.8	0.41	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	44.5	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	85		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	132	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.87	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	77	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	77	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	64		%	2	12/06/18	AW	30 - 150 %
% TCMX	62		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #4	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #6	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO
Kerosene	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO
Motor Oil	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO
Other Oil	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO
Unidentified	ND	58	mg/kg	1	12/07/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	71		%	1	12/07/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	620	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	780	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	85		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	59		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	62		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	55		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	65		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	53		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

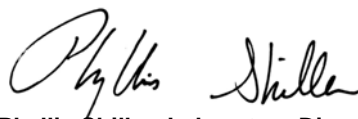
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/30/18 10:00  
12/04/18 17:20

### Time

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07234

Project ID: 5737-SOMERVILLE  
Client ID: CP 8 - 3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	5.42	0.76	mg/Kg	1	12/06/18	EK	SW6010C
Barium	19.7	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	0.34	0.30	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.38	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	10.9	0.38	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	6.53	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Lead	28.1	0.38	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.8	3.8	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.4	3.4	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	18.1	0.38	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	24.6	0.8	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	87		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	57	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.77	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	75	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	75	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	77		%	2	12/06/18	AW	30 - 150 %
% TCMX	76		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #4	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #6	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO
Kerosene	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO
Motor Oil	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO
Other Oil	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO
Unidentified	ND	57	mg/kg	1	12/07/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	60		%	1	12/07/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	380	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	610	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	760	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	380	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	380	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	88		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	64		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	70		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	65		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	74		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	56		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

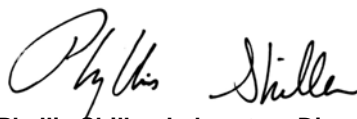
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

11/30/18 10:00  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07235

Project ID: 5737-SOMERVILLE  
Client ID: CP 8 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Arsenic	0.90	0.72	mg/Kg	1	12/06/18	EK	SW6010C
Barium	25.0	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Beryllium	< 0.29	0.29	mg/Kg	1	12/06/18	EK	SW6010C
Cadmium	< 0.36	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Chromium	9.27	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	5.71	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Lead	2.44	0.36	mg/Kg	1	12/06/18	EK	SW6010C
Antimony	< 3.6	3.6	mg/Kg	1	12/06/18	EK	SW6010C
Selenium	< 1.4	1.4	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	TH	SW6010C
Thallium	< 3.2	3.2	mg/Kg	1	12/06/18	EK	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	14.7	0.36	mg/Kg	1	12/07/18	EK	SW6010C
Zinc	14.7	0.7	mg/Kg	1	12/06/18	EK	SW6010C
Percent Solid	84		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	21	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.56	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/04/18	SAG/BF	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	78	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	78	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	73		%	2	12/06/18	AW	30 - 150 %
% TCMX	74		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #4	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Fuel Oil #6	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Kerosene	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Motor Oil	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Other Oil	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO
Unidentified	ND	59	mg/kg	1	12/07/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	53		%	1	12/07/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	390	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	620	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	780	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	390	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	270	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	390	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	100		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	63		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	69		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	62		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	71		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	58		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

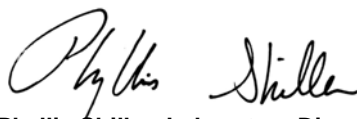
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/30/18  
12/04/18

### Time

12:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07236

Project ID: 5737-SOMERVILLE  
Client ID: CP 9 - 3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	12/06/18	TH	SW6010C
Arsenic	2.77	0.75	mg/Kg	1	12/06/18	TH	SW6010C
Barium	23.9	0.37	mg/Kg	1	12/06/18	TH	SW6010C
Beryllium	0.32	0.30	mg/Kg	1	12/06/18	TH	SW6010C
Cadmium	0.86	0.37	mg/Kg	1	12/06/18	TH	SW6010C
Chromium	9.88	0.37	mg/Kg	1	12/06/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	14.6	0.37	mg/Kg	1	12/06/18	TH	SW6010C
Lead	31.3	0.34	mg/Kg	1	12/12/18	EK	SW6010C
Antimony	< 3.7	3.7	mg/Kg	1	12/06/18	TH	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/12/18	EK	SW6010C
Thallium	< 3.4	3.4	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Metals Digestion	Completed				12/12/18	Q/Q	SW3010A
Vanadium	20.2	0.37	mg/Kg	1	12/06/18	TH	SW6010C
Zinc	54.5	0.7	mg/Kg	1	12/06/18	TH	SW6010C
Percent Solid	93		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	40	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.36	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/11/18	Q	SW1311
Total Metals Digest	Completed				12/11/18	M/AG	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	71	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	71	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	61		%	2	12/06/18	AW	30 - 150 %
% TCMX	64		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	53	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	80		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	350	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	570	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	710	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	350	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	250	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	350	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	109		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	73		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	67		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	76		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	61		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

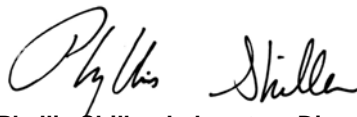
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

11/30/18 12:00  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07237

Project ID: 5737-SOMERVILLE  
Client ID: CP 9 - 5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.41	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Arsenic	2.56	0.83	mg/Kg	1	12/06/18	TH	SW6010C
Barium	17.3	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Beryllium	< 0.33	0.33	mg/Kg	1	12/06/18	TH	SW6010C
Cadmium	< 0.41	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Chromium	10.2	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Mercury	< 0.04	0.04	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	8.22	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Lead	13.3	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Antimony	< 4.1	4.1	mg/Kg	1	12/06/18	TH	SW6010C
Selenium	< 1.7	1.7	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	CPP	SW6010C
Thallium	< 3.7	3.7	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	14.5	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Zinc	25.1	0.8	mg/Kg	1	12/06/18	TH	SW6010C
Percent Solid	73		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	68	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	7.11	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/05/18	CK/AG	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	90	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	90	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	67		%	2	12/06/18	AW	30 - 150 %
% TCMX	70		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	68	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	97		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	450	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	720	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	900	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	450	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	320	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	450	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	102		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	67		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	69		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	64		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	72		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	59		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

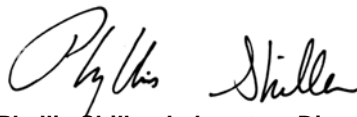
The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

11/30/18  
12/04/18

### Time

14:00  
17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07238

Project ID: 5737-SOMERVILLE  
Client ID: CP 10 - 3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	94		%		12/04/18	AK	SW846-%Solid

### Volatiles

1,1,1,2-Tetrachloroethane	ND	100	ug/Kg	50	12/05/18	PS	SW8260C
1,1,1-Trichloroethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,1,2,2-Tetrachloroethane	ND	20	ug/Kg	50	12/05/18	PS	SW8260C
1,1,2-Trichloroethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,1-Dichloroethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,1-Dichloroethene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,1-Dichloropropene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2,3-Trichlorobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2,3-Trichloropropane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2,4-Trichlorobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2,4-Trimethylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2-Dibromo-3-chloropropane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2-Dibromoethane	ND	100	ug/Kg	50	12/05/18	PS	SW8260C
1,2-Dichlorobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,2-Dichloroethane	ND	100	ug/Kg	50	12/05/18	PS	SW8260C
1,2-Dichloropropane	ND	100	ug/Kg	50	12/05/18	PS	SW8260C
1,3,5-Trimethylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,3-Dichlorobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,3-Dichloropropane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
1,4-Dichlorobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
2,2-Dichloropropane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
2-Chlorotoluene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
2-Hexanone	ND	590	ug/Kg	50	12/05/18	PS	SW8260C
2-Isopropyltoluene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
4-Chlorotoluene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	590	ug/Kg	50	12/05/18	PS	SW8260C
Acetone	ND	5900	ug/Kg	50	12/05/18	PS	SW8260C
Acrylonitrile	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Benzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Bromobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Bromochloromethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Bromodichloromethane	ND	100	ug/Kg	50	12/05/18	PS	SW8260C
Bromoform	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Bromomethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Carbon Disulfide	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Carbon tetrachloride	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Chlorobenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Chloroethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Chloroform	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Chloromethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
cis-1,2-Dichloroethene	ND	100	ug/Kg	50	12/05/18	PS	SW8260C
cis-1,3-Dichloropropene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Dibromochloromethane	ND	30	ug/Kg	50	12/05/18	PS	SW8260C
Dibromomethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Dichlorodifluoromethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Ethylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Hexachlorobutadiene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Isopropylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
m&p-Xylene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Methyl Ethyl Ketone	ND	710	ug/Kg	50	12/05/18	PS	SW8260C
Methyl t-butyl ether (MTBE)	ND	240	ug/Kg	50	12/05/18	PS	SW8260C
Methylene chloride	ND	240	ug/Kg	50	12/05/18	PS	SW8260C
Naphthalene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
n-Butylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
n-Propylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
o-Xylene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
p-Isopropyltoluene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
sec-Butylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Styrene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
tert-Butylbenzene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Tetrachloroethene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Tetrahydrofuran (THF)	ND	240	ug/Kg	50	12/05/18	PS	SW8260C
Toluene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Total Xylenes	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
trans-1,2-Dichloroethene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
trans-1,3-Dichloropropene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
trans-1,4-dichloro-2-butene	ND	240	ug/Kg	50	12/05/18	PS	SW8260C
Trichloroethene	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Trichlorofluoromethane	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
Trichlorotrifluoroethane	ND	240	ug/Kg	50	12/05/18	PS	SW8260C
Vinyl chloride	ND	120	ug/Kg	50	12/05/18	PS	SW8260C
<b><u>QA/QC Surrogates</u></b>							
% 1,2-dichlorobenzene-d4	97		%	50	12/05/18	PS	70 - 130 %
% Bromofluorobenzene	97		%	50	12/05/18	PS	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	88		%	50	12/05/18	PS	70 - 130 %
% Toluene-d8	97		%	50	12/05/18	PS	70 - 130 %

**Oxygenates & Dioxane**

1,4-Dioxane	ND	2400	ug/Kg	50	12/05/18	PS	SW8260C (OXY)
Diethyl ether	ND	120	ug/Kg	50	12/05/18	PS	SW8260C (OXY)
Di-isopropyl ether	ND	120	ug/Kg	50	12/05/18	PS	SW8260C (OXY)
Ethyl tert-butyl ether	ND	120	ug/Kg	50	12/05/18	PS	SW8260C (OXY)
tert-amyl methyl ether	ND	120	ug/Kg	50	12/05/18	PS	SW8260C (OXY)
Field Extraction	Completed				11/30/18		SW5035A

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

**Comments:****Volatile Comment:**

Poor IS recoveries were observed for low level volatiles due to dirt in the threads of the vial preventing the sample from purging. Both low level vials had this problem, results are reported from the methanol high level.

**Volatile Comment:**

Where the LOD justifies lowering the RL/PQL, the RL/PQL of some compounds are evaluated below the lowest calibration standard in order to meet criteria.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date      Time

11/30/18      14:00  
12/04/18      17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07239

Project ID: 5737-SOMERVILLE  
Client ID: CP 10 - 6 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.41	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Arsenic	4.59	0.82	mg/Kg	1	12/06/18	TH	SW6010C
Barium	28.8	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Beryllium	0.41	0.33	mg/Kg	1	12/06/18	TH	SW6010C
Cadmium	< 0.41	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Chromium	14.5	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	10.1	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Lead	4.58	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Antimony	< 4.1	4.1	mg/Kg	1	12/06/18	TH	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	CPP	SW6010C
Thallium	< 3.7	3.7	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	22.5	0.41	mg/Kg	1	12/06/18	TH	SW6010C
Zinc	23.4	0.8	mg/Kg	1	12/06/18	TH	SW6010C
Percent Solid	80		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	36	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.75	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/05/18	CK/AG	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	81	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	80		%	2	12/06/18	AW	30 - 150 %
% TCMX	74		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	84		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	420	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	660	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	830	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	420	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	290	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	420	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	91		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	63		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	66		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	61		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	71		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	59		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

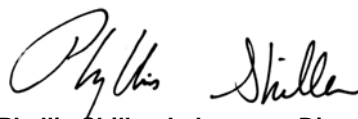
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

11/30/18 14:00  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07240

Project ID: 5737-SOMERVILLE  
Client ID: CP 10- 11 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Arsenic	4.07	0.80	mg/Kg	1	12/06/18	TH	SW6010C
Barium	19.3	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Beryllium	0.33	0.32	mg/Kg	1	12/06/18	TH	SW6010C
Cadmium	< 0.40	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Chromium	10.8	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	8.05	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Lead	3.21	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Antimony	< 4.0	4.0	mg/Kg	1	12/06/18	TH	SW6010C
Selenium	< 1.6	1.6	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	CPP	SW6010C
Thallium	< 3.6	3.6	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	18.3	0.40	mg/Kg	1	12/06/18	TH	SW6010C
Zinc	17.9	0.8	mg/Kg	1	12/06/18	TH	SW6010C
Percent Solid	82		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	28	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.68	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/05/18	CK/AG	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	79	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	79	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	63		%	2	12/06/18	AW	30 - 150 %
% TCMX	61		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	59	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	76		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	400	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	640	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	800	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	400	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	96		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	63		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	75		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	67		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	76		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	60		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

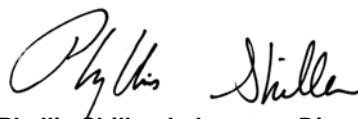
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
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Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date Time

12/03/18  
12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07241

Project ID: 5737-SOMERVILLE  
Client ID: CP 15 - 3 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	89		%		12/04/18	AK	SW846-%Solid

### Volatiles

1,1,1,2-Tetrachloroethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	2.8	ug/Kg	1	12/05/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloroethene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,1-Dichloropropene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dibromoethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloroethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,2-Dichloropropane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,3-Dichloropropane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
2,2-Dichloropropane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
2-Chlorotoluene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
2-Hexanone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
2-Isopropyltoluene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
4-Chlorotoluene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	23	ug/Kg	1	12/05/18	JLI	SW8260C
Acetone	ND	230	ug/Kg	1	12/05/18	JLI	SW8260C
Acrylonitrile	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Benzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Bromobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Bromochloromethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Bromodichloromethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Bromoform	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Bromomethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon Disulfide	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Carbon tetrachloride	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Chlorobenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Chloroform	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Chloromethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromochloromethane	ND	2.8	ug/Kg	1	12/05/18	JLI	SW8260C
Dibromomethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Dichlorodifluoromethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Ethylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Hexachlorobutadiene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Isopropylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
m&p-Xylene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	28	ug/Kg	1	12/05/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	9.3	ug/Kg	1	12/05/18	JLI	SW8260C
Methylene chloride	ND	9.3	ug/Kg	1	12/05/18	JLI	SW8260C
Naphthalene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
n-Butylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
n-Propylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
o-Xylene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
p-Isopropyltoluene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
sec-Butylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Styrene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
tert-Butylbenzene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrachloroethene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	9.3	ug/Kg	1	12/05/18	JLI	SW8260C
Toluene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Total Xylenes	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	9.3	ug/Kg	1	12/05/18	JLI	SW8260C
Trichloroethene	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorofluoromethane	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	9.3	ug/Kg	1	12/05/18	JLI	SW8260C
Vinyl chloride	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C
<b>QA/QC Surrogates</b>							
% 1,2-dichlorobenzene-d4	98		%	1	12/05/18	JLI	70 - 130 %
% Bromofluorobenzene	94		%	1	12/05/18	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	94		%	1	12/05/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	12/05/18	JLI	70 - 130 %
<b><u>Oxygenates &amp; Dioxane</u></b>							
1,4-Dioxane	ND	93	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Diethyl ether	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	4.7	ug/Kg	1	12/05/18	JLI	SW8260C (OXY)
Field Extraction	Completed				12/03/18		SW5035A

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18

### Time

17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07242

Project ID: 5737-SOMERVILLE  
Client ID: CP 15 - 6.5 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Arsenic	3.51	0.69	mg/Kg	1	12/06/18	TH	SW6010C
Barium	19.3	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Beryllium	0.32	0.27	mg/Kg	1	12/06/18	TH	SW6010C
Cadmium	< 0.34	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Chromium	12.7	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	9.34	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Lead	5.18	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Antimony	< 3.4	3.4	mg/Kg	1	12/06/18	TH	SW6010C
Selenium	< 1.4	1.4	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	CPP	SW6010C
Thallium	< 3.1	3.1	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	21.6	0.34	mg/Kg	1	12/06/18	TH	SW6010C
Zinc	23.4	0.7	mg/Kg	1	12/06/18	TH	SW6010C
Percent Solid	91		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	116	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	6.70	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 5	5	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/05/18	CK/AG	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	72	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	72	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	64		%	2	12/06/18	AW	30 - 150 %
% TCMX	64		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	74		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	12/06/18	WB	SW8270D



Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	590	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	730	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	370	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	370	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	92		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	57		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	58		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	54		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	63		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	58		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

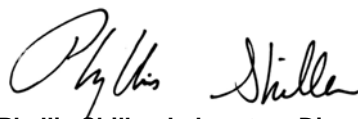
Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



Environmental Laboratories, Inc.  
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## Analysis Report

December 12, 2018

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: SOIL  
Location Code: CLEANPROP  
Rush Request: 72 Hour  
P.O.#:

### Custody Information

Collected by: MP  
Received by: SW  
Analyzed by: see "By" below

### Date

12/03/18

### Time

12/04/18 17:20

## Laboratory Data

SDG ID: GCC07212  
Phoenix ID: CC07243

Project ID: 5737-SOMERVILLE  
Client ID: CP 15 - 10 FT

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Arsenic	4.38	0.76	mg/Kg	1	12/06/18	TH	SW6010C
Barium	12.7	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Beryllium	< 0.30	0.30	mg/Kg	1	12/06/18	TH	SW6010C
Cadmium	< 0.38	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Chromium	12.4	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Mercury	< 0.03	0.03	mg/Kg	1	12/06/18	RS	SW7471B
Nickel	8.10	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Lead	6.11	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Antimony	< 3.8	3.8	mg/Kg	1	12/06/18	TH	SW6010C
Selenium	< 1.5	1.5	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Lead	< 0.10	0.10	mg/L	1	12/10/18	CPP	SW6010C
Thallium	< 3.4	3.4	mg/Kg	1	12/06/18	TH	SW6010C
TCLP Metals Digestion	Completed				12/10/18	Q/Q	SW3010A
Vanadium	23.9	0.38	mg/Kg	1	12/06/18	TH	SW6010C
Zinc	23.8	0.8	mg/Kg	1	12/06/18	TH	SW6010C
Percent Solid	81		%		12/04/18	AK	SW846-%Solid
Conductivity - Soil Matrix	81	5	umhos/cm	1	12/05/18	AP	SM2510B-11
Corrosivity	Negative		Pos/Neg	1	12/05/18	O	SW846-Corr
Flash Point	>200	200	Degree F	1	12/07/18	Y	SW1010A
Ignitability	Passed	140	degree F	1	12/07/18	Y	SW846-Ignit
pH at 25C - Soil	5.65	1.00	pH Units	1	12/05/18 21:49	O	SW9045
Reactivity Cyanide	< 6	6	mg/Kg	1	12/07/18	JO/GD	SW846-ReactCyn
Reactivity Sulfide	< 20	20	mg/Kg	1	12/07/18	JO/GD	SW-7.3
Reactivity	Negative		Pos/Neg	1	12/07/18	JO/GD	SW846-React
Soil Extraction for PCB	Completed				12/05/18	AA/V	SW3545A
Soil Extraction for SVOA	Completed				12/05/18	SB/CKV	SW3545A
Mercury Digestion	Completed				12/06/18	EV/EV	SW7471B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
TCLP Extraction for Metals	Completed				12/07/18	W	SW1311
Total Metals Digest	Completed				12/05/18	CK/AG	SW3050B
Extraction of TPH SM	Completed				12/05/18	GB/VCK	SW3545A

**Polychlorinated Biphenyls**

PCB-1016	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1221	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1232	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1242	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1248	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1254	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1260	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1262	ND	81	ug/Kg	2	12/06/18	AW	SW8082A
PCB-1268	ND	81	ug/Kg	2	12/06/18	AW	SW8082A

**QA/QC Surrogates**

% DCBP	69		%	2	12/06/18	AW	30 - 150 %
% TCMX	65		%	2	12/06/18	AW	30 - 150 %

**TPH by GC (Extractable Products)**

Fuel Oil #2 / Diesel Fuel	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #4	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Fuel Oil #6	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Kerosene	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Motor Oil	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Other Oil	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO
Unidentified	ND	62	mg/kg	1	12/06/18	JRB	SW8015D DRO

**QA/QC Surrogates**

% n-Pentacosane	77		%	1	12/06/18	JRB	50 - 150 %
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**Semivolatiles**

1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
1,3-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
1,4-Dichlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dichlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dimethylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrophenol	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
2,4-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2,6-Dinitrotoluene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chloronaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Chlorophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylnaphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitroaniline	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
2-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	400	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
3-Nitroaniline	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chloroaniline	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitroaniline	ND	640	ug/Kg	1	12/06/18	WB	SW8270D
4-Nitrophenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Acetophenone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Aniline	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benz(a)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzidine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(a)pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(b)fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzo(k)fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Benzoic acid	ND	800	ug/Kg	1	12/06/18	WB	SW8270D
Benzyl butyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Carbazole	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Chrysene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dibenzofuran	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Diethyl phthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Dimethylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-butylphthalate	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Di-n-octylphthalate	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluoranthene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorobutadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Hexachloroethane	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Isophorone	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Nitrobenzene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodimethylamine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Pentachloronitrobenzene	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
Pentachlorophenol	ND	400	ug/Kg	1	12/06/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenanthrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Phenol	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyrene	ND	280	ug/Kg	1	12/06/18	WB	SW8270D
Pyridine	ND	400	ug/Kg	1	12/06/18	WB	SW8270D
<b><u>QA/QC Surrogates</u></b>							
% 2,4,6-Tribromophenol	93		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorobiphenyl	62		%	1	12/06/18	WB	30 - 130 %
% 2-Fluorophenol	70		%	1	12/06/18	WB	30 - 130 %
% Nitrobenzene-d5	66		%	1	12/06/18	WB	30 - 130 %
% Phenol-d5	71		%	1	12/06/18	WB	30 - 130 %
% Terphenyl-d14	57		%	1	12/06/18	WB	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

### **Comments:**

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

Corrosivity is based solely on the pH analysis performed above.

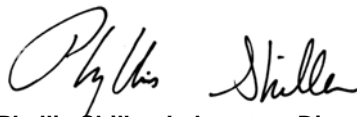
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.

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**Phyllis Shiller, Laboratory Director**

**December 12, 2018**

**Reviewed and Released by: Rashmi Makol, Project Manager**



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## QA/QC Report

December 12, 2018

### QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 458691 (mg/kg), QC Sample No: CC07214 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229)													
Mercury - Soil	BRL	0.03	0.06	0.04	NC	106	103	2.9	106			75 - 125	20

Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 458692 (mg/kg), QC Sample No: CC08376 (CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)

Mercury - Soil	BRL	0.02	0.09	0.13	NC	107	101	5.8	92.4			75 - 125	20
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

QA/QC Batch 458387 (mg/kg), QC Sample No: CC07212 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235)

#### ICP Metals - Soil

Antimony	BRL	3.3	<4.2	<3.6	NC	102			92.9			75 - 125	30
Arsenic	BRL	0.67	4.85	5.78	17.5	110			95.0			75 - 125	30
Barium	BRL	0.33	23.8	22.3	6.50	116			106			75 - 125	30
Beryllium	BRL	0.27	0.40	0.45	NC	119			106			75 - 125	30
Cadmium	BRL	0.33	<0.42	<0.36	NC	114			98.3			75 - 125	30
Chromium	BRL	0.33	13.4	14.2	5.80	114			111			75 - 125	30
Lead	BRL	0.33	78.7	102	25.8	114			104			75 - 125	30
Nickel	BRL	0.33	10.0	9.68	3.30	120			106			75 - 125	30
Selenium	BRL	1.3	<1.7	<1.5	NC	96.1			86.2			75 - 125	30
Silver	BRL	0.33	<0.42	<0.36	NC	111			97.6			75 - 125	30
Thallium	BRL	3.0	<3.8	<3.3	NC	116			99.9			75 - 125	30
Vanadium	BRL	0.33	22.9	23.2	1.30	113			101			75 - 125	30
Zinc	BRL	0.67	42.8	47.2	9.80	113			97.7			75 - 125	30

QA/QC Batch 458502 (mg/kg), QC Sample No: CC07236 (CC07237, CC07239, CC07240, CC07242, CC07243)

#### ICP Metals - Soil

Antimony	BRL	3.5	<3.7	<3.2	NC	110			94.3			75 - 125	30
Arsenic	BRL	0.69	2.77	2.91	NC	98.0			94.4			75 - 125	30
Barium	BRL	0.35	23.9	19.5	20.3	96.9			97.9			75 - 125	30
Beryllium	BRL	0.28	0.32	0.29	NC	95.2			95.5			75 - 125	30
Cadmium	BRL	0.35	0.86	0.58	NC	99.7			96.5			75 - 125	30
Chromium	BRL	0.35	9.88	10.7	8.00	98.4			98.9			75 - 125	30
Lead	BRL	0.35	31.3	21.5	37.1	95.6			92.9			75 - 125	30
Nickel	BRL	0.35	14.6	14.0	4.20	97.2			96.9			75 - 125	30
Selenium	BRL	1.4	<1.5	<1.3	NC	85.7			85.3			75 - 125	30
Silver	BRL	0.35	<0.37	<0.32	NC	90.8			93.2			75 - 125	30
Thallium	BRL	3.1	<3.4	<2.9	NC	97.9			96.3			75 - 125	30
Vanadium	BRL	0.35	20.2	22.9	12.5	102			98.2			75 - 125	30
Zinc	BRL	0.69	54.5	54.9	0.70	95.5			97.0			75 - 125	30

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 459183 (mg/L), QC Sample No: CC08378 (CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233)													
<u>ICP Metals - TCLP Extraction</u>													
Lead	BRL	0.10	1.32	2.23	51.3	97.6			93.7			75 - 125	20
QA/QC Batch 458896 (mg/L), QC Sample No: CC08863 (CC07222)													
<u>ICP Metals - TCLP Extraction</u>													
Lead	BRL	0.010	0.057	0.071	21.9	101			109			75 - 125	20
QA/QC Batch 458895 (mg/L), QC Sample No: CC09605 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221)													
<u>ICP Metals - TCLP Extraction</u>													
Lead	BRL	0.10	0.10	0.10	NC	101			102			75 - 125	20
QA/QC Batch 459184 (mg/L), QC Sample No: CC09928 (CC07234, CC07235, CC07237, CC07239, CC07240, CC07242, CC07243)													
<u>ICP Metals - TCLP Extraction</u>													
Lead	BRL	0.010	<0.010	<0.010	NC	95.8			96.6			75 - 125	20
QA/QC Batch 459546 (mg/L), QC Sample No: CC11754 (CC07236)													
<u>ICP Metals - TCLP Extraction</u>													
Lead	BRL	0.010				106						75 - 125	20
QA/QC Batch 459474 (mg/kg), QC Sample No: CC11933 (CC07236)													
<u>ICP Metals - Soil</u>													
Antimony	BRL	3.4	<3.8	<3.6	NC	104			91.1			75 - 125	30
Arsenic	BRL	0.68	5.56	4.02	32.2	109			95.0			75 - 125	30
Barium	BRL	0.34	107	104	2.80	109			94.7			75 - 125	30
Beryllium	BRL	0.27	0.53	0.54	NC	109			96.6			75 - 125	30
Cadmium	BRL	0.34	0.67	0.60	NC	117			95.3			75 - 125	30
Chromium	BRL	0.34	29.1	30.0	3.00	112			97.5			75 - 125	30
Lead	BRL	0.34	128	133	3.80	107			96.1			75 - 125	30
Nickel	BRL	0.34	19.7	20.1	2.00	113			95.3			75 - 125	30
Selenium	BRL	1.4	<1.5	<1.4	NC	101			89.7			75 - 125	30
Silver	BRL	0.34	<0.38	<0.36	NC	112			97.5			75 - 125	30
Thallium	BRL	3.0	<1.5	<3.2	NC	112			96.4			75 - 125	30
Vanadium	BRL	0.34	42.1	42.3	0.50	113			94.8			75 - 125	30
Zinc	BRL	0.68	103	108	4.70	108			89.7			75 - 125	30

r = This parameter is outside laboratory RPD specified recovery limits.





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## QA/QC Report

December 12, 2018

### QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 458684 (mg/Kg), QC Sample No: CC07213 4.63X (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218)													
Reactivity Cyanide	BRL	0.05	<6	<5.8	NC	97.9						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 458723 (mg/Kg), QC Sample No: CC07219 4.81X (CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)													
Reactivity Cyanide	BRL	0.05	<6	<5.5	NC	97.2						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 458654 (umhos/cm), QC Sample No: CC07212 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235)													
Conductivity - Soil Matrix	BRL	5	111	110	0.90	96.0						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 458998 (Degree F), QC Sample No: CC07212 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 458655 (umhos/cm), QC Sample No: CC07236 (CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)													
Conductivity - Soil Matrix	BRL	5	40	40	0	99.0						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 458997 (Degree F), QC Sample No: CC07236 (CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													



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## QA/QC Report

December 12, 2018

### QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 458508 (mg/Kg), QC Sample No: CC07212 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235)

#### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	95	87	8.8	117	111	5.3	50 - 150	30
% n-Pentacosane	76	%	73	67	8.6	87	81	7.1	50 - 150	30

Comment:

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 458478 (mg/Kg), QC Sample No: CC07673 (CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)

#### TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	86	73	16.4	73	69	5.6	50 - 150	30
% n-Pentacosane	63	%	63	57	10.0	65	67	3.0	50 - 150	30

Comment:

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 458634 (ug/Kg), QC Sample No: CC07221 2X (CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)

#### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	94	76	21.2	80	68	16.2	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	95	80	17.1	82	72	13.0	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	90	%	101	96	5.1	81	64	23.4	30 - 150	30
% TCMX (Surrogate Rec)	89	%	101	86	16.0	80	68	16.2	30 - 150	30

QA/QC Batch 458471 (ug/Kg), QC Sample No: CC07532 2X (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218)

#### Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	82	81	1.2	69	74	7.0	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	85	84	1.2	71	74	4.1	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	70	%	84	90	6.9	79	84	6.1	30 - 150	30
% TCMX (Surrogate Rec)	79	%	80	85	6.1	68	71	4.3	30 - 150	30

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 459004 (ug/Kg), QC Sample No: CC10400 2X (CC07219)										
<u>Polychlorinated Biphenyls - Soil</u>										
PCB-1016	ND	33	86	114	28.0	86	84	2.4	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	92	94	2.2	75	74	1.3	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	83	%	99	108	8.7	85	84	1.2	30 - 150	30
% TCMX (Surrogate Rec)	79	%	96	105	9.0	76	76	0.0	30 - 150	30
QA/QC Batch 458467 (ug/kg), QC Sample No: CC07213 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217)										
<u>Semivolatiles - Soil</u>										
1,2,4,5-Tetrachlorobenzene	ND	230	71	67	5.8	60	60	0.0	30 - 130	30
1,2,4-Trichlorobenzene	ND	230	68	64	6.1	60	57	5.1	30 - 130	30
1,2-Dichlorobenzene	ND	180	62	58	6.7	52	52	0.0	30 - 130	30
1,2-Diphenylhydrazine	ND	230	63	67	6.2	51	55	7.5	30 - 130	30
1,3-Dichlorobenzene	ND	230	60	56	6.9	48	48	0.0	30 - 130	30
1,4-Dichlorobenzene	ND	230	63	58	8.3	51	52	1.9	30 - 130	30
2,4,5-Trichlorophenol	ND	230	81	74	9.0	63	67	6.2	30 - 130	30
2,4,6-Trichlorophenol	ND	130	76	70	8.2	59	63	6.6	30 - 130	30
2,4-Dichlorophenol	ND	130	74	69	7.0	60	65	8.0	30 - 130	30
2,4-Dimethylphenol	ND	230	71	66	7.3	58	65	11.4	30 - 130	30
2,4-Dinitrophenol	ND	230	<10	<10	NC	35	53	40.9	30 - 130	30
2,4-Dinitrotoluene	ND	130	80	76	5.1	65	73	11.6	30 - 130	30
2,6-Dinitrotoluene	ND	130	78	74	5.3	63	68	7.6	30 - 130	30
2-Chloronaphthalene	ND	230	72	68	5.7	59	59	0.0	30 - 130	30
2-Chlorophenol	ND	230	68	62	9.2	54	61	12.2	30 - 130	30
2-Methylnaphthalene	ND	230	68	64	6.1	57	59	3.4	30 - 130	30
2-Methylphenol (o-cresol)	ND	230	69	63	9.1	58	68	15.9	30 - 130	30
2-Nitroaniline	ND	330	96	88	8.7	81	88	8.3	30 - 130	30
2-Nitrophenol	ND	230	61	58	5.0	53	55	3.7	30 - 130	30
3&4-Methylphenol (m&p-cresol)	ND	230	72	66	8.7	53	65	20.3	30 - 130	30
3,3'-Dichlorobenzidine	ND	130	73	71	2.8	65	71	8.8	30 - 130	30
3-Nitroaniline	ND	330	88	83	5.8	71	79	10.7	30 - 130	30
4,6-Dinitro-2-methylphenol	ND	230	22	20	9.5	56	74	27.7	30 - 130	30
4-Bromophenyl phenyl ether	ND	230	78	77	1.3	65	63	3.1	30 - 130	30
4-Chloro-3-methylphenol	ND	230	75	70	6.9	59	67	12.7	30 - 130	30
4-Chloroaniline	ND	230	70	63	10.5	50	57	13.1	30 - 130	30
4-Chlorophenyl phenyl ether	ND	230	79	75	5.2	64	67	4.6	30 - 130	30
4-Nitroaniline	ND	230	69	65	6.0	54	59	8.8	30 - 130	30
4-Nitrophenol	ND	230	66	60	9.5	52	58	10.9	30 - 130	30
Acenaphthene	ND	230	72	68	5.7	59	60	1.7	30 - 130	30
Acenaphthylene	ND	130	67	63	6.2	55	56	1.8	30 - 130	30
Acetophenone	ND	230	60	55	8.7	48	55	13.6	30 - 130	30
Aniline	ND	330	53	49	7.8	79	87	9.6	30 - 130	30
Anthracene	ND	230	74	71	4.1	61	61	0.0	30 - 130	30
Benz(a)anthracene	ND	230	72	69	4.3	58	58	0.0	30 - 130	30
Benzidine	ND	330	44	36	20.0	44	52	16.7	30 - 130	30
Benzo(a)pyrene	ND	130	70	67	4.4	57	57	0.0	30 - 130	30

# QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Benzo(b)fluoranthene	ND	160	77	73	5.3	59	61	3.3	30 - 130	30
Benzo(ghi)perylene	ND	230	68	64	6.1	53	53	0.0	30 - 130	30
Benzo(k)fluoranthene	ND	230	74	69	7.0	61	59	3.3	30 - 130	30
Benzoic Acid	ND	330	<10	<10	NC	14	27	63.4	30 - 130	30
Benzyl butyl phthalate	ND	230	73	68	7.1	58	57	1.7	30 - 130	30
Bis(2-chloroethoxy)methane	ND	230	69	64	7.5	56	60	6.9	30 - 130	30
Bis(2-chloroethyl)ether	ND	130	58	53	9.0	48	50	4.1	30 - 130	30
Bis(2-chloroisopropyl)ether	ND	230	44	40	9.5	35	38	8.2	30 - 130	30
Bis(2-ethylhexyl)phthalate	ND	230	74	70	5.6	60	57	5.1	30 - 130	30
Carbazole	ND	230	77	72	6.7	63	64	1.6	30 - 130	30
Chrysene	ND	230	76	73	4.0	61	61	0.0	30 - 130	30
Dibenz(a,h)anthracene	ND	130	74	69	7.0	60	59	1.7	30 - 130	30
Dibenzofuran	ND	230	76	70	8.2	60	62	3.3	30 - 130	30
Diethyl phthalate	ND	230	75	71	5.5	60	66	9.5	30 - 130	30
Dimethylphthalate	ND	230	78	73	6.6	61	67	9.4	30 - 130	30
Di-n-butylphthalate	ND	670	80	75	6.5	63	64	1.6	30 - 130	30
Di-n-octylphthalate	ND	230	74	70	5.6	59	59	0.0	30 - 130	30
Fluoranthene	ND	230	78	75	3.9	64	67	4.6	30 - 130	30
Fluorene	ND	230	75	70	6.9	60	64	6.5	30 - 130	30
Hexachlorobenzene	ND	130	71	69	2.9	59	57	3.4	30 - 130	30
Hexachlorobutadiene	ND	230	70	65	7.4	60	55	8.7	30 - 130	30
Hexachlorocyclopentadiene	ND	230	57	55	3.6	32	24	28.6	30 - 130	30
Hexachloroethane	ND	130	57	54	5.4	46	45	2.2	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	69	65	6.0	55	54	1.8	30 - 130	30
Isophorone	ND	130	59	56	5.2	49	51	4.0	30 - 130	30
Naphthalene	ND	230	66	61	7.9	56	57	1.8	30 - 130	30
Nitrobenzene	ND	130	62	57	8.4	50	56	11.3	30 - 130	30
N-Nitrosodimethylamine	ND	230	58	54	7.1	48	55	13.6	30 - 130	30
N-Nitrosodi-n-propylamine	ND	130	64	58	9.8	50	57	13.1	30 - 130	30
N-Nitrosodiphenylamine	ND	130	78	72	8.0	63	69	9.1	30 - 130	30
Pentachloronitrobenzene	ND	230	72	69	4.3	59	57	3.4	30 - 130	30
Pentachlorophenol	ND	230	60	55	8.7	55	60	8.7	30 - 130	30
Phenanthrene	ND	130	73	70	4.2	59	60	1.7	30 - 130	30
Phenol	ND	230	69	63	9.1	50	60	18.2	30 - 130	30
Pyrene	ND	230	79	76	3.9	64	67	4.6	30 - 130	30
Pyridine	ND	230	39	39	0.0	38	39	2.6	30 - 130	30
% 2,4,6-Tribromophenol	53	%	63	60	4.9	51	51	0.0	30 - 130	30
% 2-Fluorobiphenyl	66	%	62	58	6.7	52	51	1.9	30 - 130	30
% 2-Fluorophenol	52	%	62	57	8.4	48	54	11.8	30 - 130	30
% Nitrobenzene-d5	49	%	54	49	9.7	43	48	11.0	30 - 130	30
% Phenol-d5	56	%	69	63	9.1	51	60	16.2	30 - 130	30
% Terphenyl-d14	66	%	67	64	4.6	55	57	3.6	30 - 130	30

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 458501 (ug/kg), QC Sample No: CC07222 (CC07218, CC07219, CC07221, CC07222, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243)

## Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	68	69	1.5	57	58	1.7	30 - 130	30
1,2,4-Trichlorobenzene	ND	230	65	70	7.4	59	60	1.7	30 - 130	30
1,2-Dichlorobenzene	ND	180	58	63	8.3	54	57	5.4	30 - 130	30
1,2-Diphenylhydrazine	ND	230	88	83	5.8	75	75	0.0	30 - 130	30

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,3-Dichlorobenzene	ND	230	54	59	8.8	49	53	7.8	30 - 130	30	
1,4-Dichlorobenzene	ND	230	56	62	10.2	52	56	7.4	30 - 130	30	
2,4,5-Trichlorophenol	ND	230	71	73	2.8	63	64	1.6	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	75	75	0.0	59	64	8.1	30 - 130	30	
2,4-Dichlorophenol	ND	130	77	77	0.0	65	66	1.5	30 - 130	30	
2,4-Dimethylphenol	ND	230	79	78	1.3	72	69	4.3	30 - 130	30	
2,4-Dinitrophenol	ND	230	<10	<10	NC	<10	<10	NC	30 - 130	30	I,m
2,4-Dinitrotoluene	ND	130	85	80	6.1	71	74	4.1	30 - 130	30	
2,6-Dinitrotoluene	ND	130	81	74	9.0	70	68	2.9	30 - 130	30	
2-Chloronaphthalene	ND	230	73	75	2.7	60	65	8.0	30 - 130	30	
2-Chlorophenol	ND	230	69	71	2.9	60	65	8.0	30 - 130	30	
2-Methylnaphthalene	ND	230	71	69	2.9	62	61	1.6	30 - 130	30	
2-Methylphenol (o-cresol)	ND	230	82	81	1.2	66	69	4.4	30 - 130	30	
2-Nitroaniline	ND	330	130	119	8.8	101	114	12.1	30 - 130	30	
2-Nitrophenol	ND	230	79	84	6.1	77	69	11.0	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	81	81	0.0	61	69	12.3	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	73	70	4.2	62	65	4.7	30 - 130	30	
3-Nitroaniline	ND	330	95	95	0.0	86	82	4.8	30 - 130	30	
4,6-Dinitro-2-methylphenol	ND	230	10	12	18.2	31	18	53.1	30 - 130	30	I,m,r
4-Bromophenyl phenyl ether	ND	230	76	73	4.0	65	65	0.0	30 - 130	30	
4-Chloro-3-methylphenol	ND	230	89	83	7.0	75	73	2.7	30 - 130	30	
4-Chloroaniline	ND	230	82	88	7.1	78	78	0.0	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	230	77	73	5.3	63	66	4.7	30 - 130	30	
4-Nitroaniline	ND	230	90	88	2.2	75	82	8.9	30 - 130	30	
4-Nitrophenol	ND	230	86	82	4.8	70	72	2.8	30 - 130	30	
Acenaphthene	ND	230	78	78	0.0	63	68	7.6	30 - 130	30	
Acenaphthylene	ND	130	68	68	0.0	58	61	5.0	30 - 130	30	
Acetophenone	ND	230	67	71	5.8	59	63	6.6	30 - 130	30	
Aniline	ND	330	58	60	3.4	57	59	3.4	30 - 130	30	
Anthracene	ND	230	79	76	3.9	63	67	6.2	30 - 130	30	
Benz(a)anthracene	ND	230	78	74	5.3	62	67	7.8	30 - 130	30	
Benzidine	ND	330	37	36	2.7	43	43	0.0	30 - 130	30	
Benzo(a)pyrene	ND	130	75	72	4.1	60	62	3.3	30 - 130	30	
Benzo(b)fluoranthene	ND	160	76	75	1.3	60	66	9.5	30 - 130	30	
Benzo(ghi)perylene	ND	230	75	74	1.3	59	64	8.1	30 - 130	30	
Benzo(k)fluoranthene	ND	230	83	79	4.9	68	71	4.3	30 - 130	30	
Benzoic Acid	ND	330	<10	<10	NC	<10	<10	NC	30 - 130	30	I,m
Benzyl butyl phthalate	ND	230	89	82	8.2	71	75	5.5	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	230	76	77	1.3	63	67	6.2	30 - 130	30	
Bis(2-chloroethyl)ether	ND	130	72	76	5.4	64	69	7.5	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	230	59	62	5.0	52	57	9.2	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	230	90	83	8.1	73	75	2.7	30 - 130	30	
Carbazole	ND	230	79	77	2.6	64	70	9.0	30 - 130	30	
Chrysene	ND	230	81	78	3.8	64	67	4.6	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	81	78	3.8	65	67	3.0	30 - 130	30	
Dibenzofuran	ND	230	75	75	0.0	62	68	9.2	30 - 130	30	
Diethyl phthalate	ND	230	82	75	8.9	69	71	2.9	30 - 130	30	
Dimethylphthalate	ND	230	81	77	5.1	67	71	5.8	30 - 130	30	
Di-n-butylphthalate	ND	670	89	82	8.2	70	75	6.9	30 - 130	30	
Di-n-octylphthalate	ND	230	87	85	2.3	68	74	8.5	30 - 130	30	
Fluoranthene	ND	230	75	75	0.0	63	68	7.6	30 - 130	30	
Fluorene	ND	230	78	76	2.6	66	69	4.4	30 - 130	30	
Hexachlorobenzene	ND	130	87	82	5.9	68	76	11.1	30 - 130	30	

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Hexachlorobutadiene	ND	230	61	67	9.4	58	55	5.3	30 - 130	30
Hexachlorocyclopentadiene	ND	230	60	53	12.4	42	48	13.3	30 - 130	30
Hexachloroethane	ND	130	60	67	11.0	56	58	3.5	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	66	64	3.1	51	55	7.5	30 - 130	30
Isophorone	ND	130	70	66	5.9	60	61	1.7	30 - 130	30
Naphthalene	ND	230	67	69	2.9	59	61	3.3	30 - 130	30
Nitrobenzene	ND	130	72	74	2.7	65	67	3.0	30 - 130	30
N-Nitrosodimethylamine	ND	230	56	63	11.8	55	60	8.7	30 - 130	30
N-Nitrosodi-n-propylamine	ND	130	77	83	7.5	65	70	7.4	30 - 130	30
N-Nitrosodiphenylamine	ND	130	79	74	6.5	68	72	5.7	30 - 130	30
Pentachloronitrobenzene	ND	230	80	73	9.2	64	69	7.5	30 - 130	30
Pentachlorophenol	ND	230	41	41	0.0	34	25	30.5	30 - 130	30
Phenanthrene	ND	130	77	75	2.6	62	67	7.8	30 - 130	30
Phenol	ND	230	88	86	2.3	73	76	4.0	30 - 130	30
Pyrene	ND	230	79	77	2.6	64	68	6.1	30 - 130	30
Pyridine	ND	230	40	41	2.5	40	37	7.8	30 - 130	30
% 2,4,6-Tribromophenol	74	%	98	96	2.1	76	77	1.3	30 - 130	30
% 2-Fluorobiphenyl	63	%	62	66	6.3	53	53	0.0	30 - 130	30
% 2-Fluorophenol	69	%	68	75	9.8	57	62	8.4	30 - 130	30
% Nitrobenzene-d5	63	%	64	66	3.1	55	59	7.0	30 - 130	30
% Phenol-d5	71	%	73	74	1.4	60	62	3.3	30 - 130	30
% Terphenyl-d14	58	%	61	60	1.7	50	52	3.9	30 - 130	30

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 458779 (ug/kg), QC Sample No: CC08777 (CC07224)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	230	71	70	1.4	77	82	6.3	30 - 130	30
1,2,4-Trichlorobenzene	ND	230	66	63	4.7	67	69	2.9	30 - 130	30
1,2-Dichlorobenzene	ND	180	60	56	6.9	64	65	1.6	30 - 130	30
1,2-Diphenylhydrazine	ND	230	69	70	1.4	65	70	7.4	30 - 130	30
1,3-Dichlorobenzene	ND	230	57	54	5.4	60	59	1.7	30 - 130	30
1,4-Dichlorobenzene	ND	230	61	55	10.3	62	64	3.2	30 - 130	30
2,4,5-Trichlorophenol	ND	230	78	77	1.3	83	86	3.6	30 - 130	30
2,4,6-Trichlorophenol	ND	130	74	71	4.1	75	76	1.3	30 - 130	30
2,4-Dichlorophenol	ND	130	74	73	1.4	86	90	4.5	30 - 130	30
2,4-Dimethylphenol	ND	230	69	68	1.5	80	86	7.2	30 - 130	30
2,4-Dinitrophenol	ND	230	<10	<10	NC	50	10	133.3	30 - 130	30
2,4-Dinitrotoluene	ND	130	93	96	3.2	86	94	8.9	30 - 130	30
2,6-Dinitrotoluene	ND	130	85	85	0.0	82	85	3.6	30 - 130	30
2-Chloronaphthalene	ND	230	66	64	3.1	67	70	4.4	30 - 130	30
2-Chlorophenol	ND	230	63	60	4.9	72	76	5.4	30 - 130	30
2-Methylnaphthalene	ND	230	67	65	3.0	73	77	5.3	30 - 130	30
2-Methylphenol (o-cresol)	ND	230	63	66	4.7	88	92	4.4	30 - 130	30
2-Nitroaniline	ND	330	110	110	0.0	109	120	9.6	30 - 130	30
2-Nitrophenol	ND	230	60	57	5.1	61	60	1.7	30 - 130	30
3&4-Methylphenol (m&p-cresol)	ND	230	67	44	41.4	57	61	6.8	30 - 130	30
3,3'-Dichlorobenzidine	ND	130	70	67	4.4	70	79	12.1	30 - 130	30
3-Nitroaniline	ND	330	98	98	0.0	96	104	8.0	30 - 130	30
4,6-Dinitro-2-methylphenol	ND	230	24	19	23.3	105	26	120.6	30 - 130	30
4-Bromophenyl phenyl ether	ND	230	76	71	6.8	74	77	4.0	30 - 130	30
4-Chloro-3-methylphenol	ND	230	78	81	3.8	97	101	4.0	30 - 130	30

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
4-Chloroaniline	ND	230	72	70	2.8	76	82	7.6	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	230	82	82	0.0	80	86	7.2	30 - 130	30	
4-Nitroaniline	ND	230	70	69	1.4	67	71	5.8	30 - 130	30	
4-Nitrophenol	ND	230	76	77	1.3	70	72	2.8	30 - 130	30	
Acenaphthene	ND	230	71	71	0.0	70	77	9.5	30 - 130	30	
Acenaphthylene	ND	130	65	63	3.1	65	69	6.0	30 - 130	30	
Acetophenone	ND	230	56	54	3.6	64	67	4.6	30 - 130	30	
Aniline	ND	330	56	53	5.5	62	60	3.3	30 - 130	30	
Anthracene	ND	230	71	70	1.4	70	75	6.9	30 - 130	30	
Benz(a)anthracene	ND	230	68	67	1.5	63	68	7.6	30 - 130	30	
Benzidine	ND	330	45	45	0.0	32	44	31.6	30 - 130	30	r
Benzo(a)pyrene	ND	130	68	66	3.0	62	66	6.3	30 - 130	30	
Benzo(b)fluoranthene	ND	160	74	72	2.7	66	69	4.4	30 - 130	30	
Benzo(ghi)perylene	ND	230	62	59	5.0	40	56	33.3	30 - 130	30	r
Benzo(k)fluoranthene	ND	230	72	71	1.4	69	74	7.0	30 - 130	30	
Benzoic Acid	ND	330	<10	<10	NC	31	<10	NC	30 - 130	30	l,m
Benzyl butyl phthalate	ND	230	73	71	2.8	67	69	2.9	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	230	65	62	4.7	64	67	4.6	30 - 130	30	
Bis(2-chloroethyl)ether	ND	130	55	52	5.6	58	59	1.7	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	230	41	37	10.3	43	44	2.3	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	230	73	71	2.8	69	77	11.0	30 - 130	30	
Carbazole	ND	230	75	75	0.0	71	75	5.5	30 - 130	30	
Chrysene	ND	230	72	70	2.8	70	75	6.9	30 - 130	30	
Dibenz(a,h)anthracene	ND	130	68	65	4.5	52	65	22.2	30 - 130	30	
Dibenzofuran	ND	230	74	73	1.4	74	79	6.5	30 - 130	30	
Diethyl phthalate	ND	230	83	86	3.6	77	82	6.3	30 - 130	30	
Dimethylphthalate	ND	230	83	82	1.2	74	79	6.5	30 - 130	30	
Di-n-butylphthalate	ND	670	79	79	0.0	73	77	5.3	30 - 130	30	
Di-n-octylphthalate	ND	230	70	69	1.4	64	69	7.5	30 - 130	30	
Fluoranthene	ND	230	78	80	2.5	69	73	5.6	30 - 130	30	
Fluorene	ND	230	78	78	0.0	76	83	8.8	30 - 130	30	
Hexachlorobenzene	ND	130	68	65	4.5	61	65	6.3	30 - 130	30	
Hexachlorobutadiene	ND	230	68	63	7.6	65	67	3.0	30 - 130	30	
Hexachlorocyclopentadiene	ND	230	53	50	5.8	30	25	18.2	30 - 130	30	m
Hexachloroethane	ND	130	56	52	7.4	57	56	1.8	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	230	65	62	4.7	44	57	25.7	30 - 130	30	
Isophorone	ND	130	59	59	0.0	58	61	5.0	30 - 130	30	
Naphthalene	ND	230	64	61	4.8	67	70	4.4	30 - 130	30	
Nitrobenzene	ND	130	58	56	3.5	68	70	2.9	30 - 130	30	
N-Nitrosodimethylamine	ND	230	55	49	11.5	55	55	0.0	30 - 130	30	
N-Nitrosodi-n-propylamine	ND	130	58	57	1.7	64	68	6.1	30 - 130	30	
N-Nitrosodiphenylamine	ND	130	87	88	1.1	83	92	10.3	30 - 130	30	
Pentachloronitrobenzene	ND	230	70	69	1.4	65	70	7.4	30 - 130	30	
Pentachlorophenol	ND	230	62	53	15.7	61	48	23.9	30 - 130	30	
Phenanthrene	ND	130	70	69	1.4	69	74	7.0	30 - 130	30	
Phenol	ND	230	63	59	6.6	75	89	17.1	30 - 130	30	
Pyrene	ND	230	79	80	1.3	69	73	5.6	30 - 130	30	
Pyridine	ND	230	38	35	8.2	41	41	0.0	30 - 130	30	
% 2,4,6-Tribromophenol	48	%	59	57	3.4	55	52	5.6	30 - 130	30	
% 2-Fluorobiphenyl	63	%	57	53	7.3	56	58	3.5	30 - 130	30	
% 2-Fluorophenol	53	%	59	54	8.8	61	61	0.0	30 - 130	30	
% Nitrobenzene-d5	49	%	51	47	8.2	57	59	3.4	30 - 130	30	
% Phenol-d5	58	%	65	59	9.7	75	76	1.3	30 - 130	30	

# QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Terphenyl-d14	72	%	69	70	1.4	58	62	6.7	30 - 130	30

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 458441 (ug/kg), QC Sample No: CC06736 (CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07223, CC07227, CC07232, CC07241)

## Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	109	109	0.0	102	102	0.0	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	106	102	3.8	97	100	3.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	110	110	0.0	104	104	0.0	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	101	103	2.0	94	94	0.0	70 - 130	30
1,1-Dichloroethane	ND	5.0	104	104	0.0	99	101	2.0	70 - 130	30
1,1-Dichloroethene	ND	5.0	106	103	2.9	95	99	4.1	70 - 130	30
1,1-Dichloropropene	ND	5.0	105	106	0.9	96	97	1.0	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	109	109	0.0	85	85	0.0	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	96	100	4.1	96	94	2.1	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	105	103	1.9	82	81	1.2	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	107	105	1.9	98	100	2.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	115	117	1.7	94	94	0.0	70 - 130	30
1,2-Dibromoethane	ND	5.0	107	106	0.9	100	96	4.1	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	103	102	1.0	94	94	0.0	70 - 130	30
1,2-Dichloroethane	ND	5.0	101	103	2.0	97	93	4.2	70 - 130	30
1,2-Dichloropropane	ND	5.0	103	105	1.9	100	98	2.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	106	104	1.9	98	101	3.0	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	104	102	1.9	93	94	1.1	70 - 130	30
1,3-Dichloropropane	ND	5.0	103	103	0.0	99	97	2.0	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	100	99	1.0	89	88	1.1	70 - 130	30
1,4-dioxane	ND	100	117	109	7.1	121	117	3.4	40 - 160	30
2,2-Dichloropropane	ND	5.0	113	111	1.8	99	96	3.1	70 - 130	30
2-Chlorotoluene	ND	5.0	107	104	2.8	99	100	1.0	70 - 130	30
2-Hexanone	ND	25	101	103	2.0	91	86	5.6	40 - 160	30
2-Isopropyltoluene	ND	5.0	109	107	1.9	102	104	1.9	70 - 130	30
4-Chlorotoluene	ND	5.0	104	102	1.9	93	94	1.1	70 - 130	30
4-Methyl-2-pentanone	ND	25	105	108	2.8	96	94	2.1	40 - 160	30
Acetone	ND	10	74	70	5.6	62	59	5.0	40 - 160	30
Acrylonitrile	ND	5.0	101	103	2.0	91	92	1.1	70 - 130	30
Benzene	ND	1.0	102	101	1.0	94	94	0.0	70 - 130	30
Bromobenzene	ND	5.0	105	104	1.0	97	96	1.0	70 - 130	30
Bromochloromethane	ND	5.0	104	102	1.9	95	96	1.0	70 - 130	30
Bromodichloromethane	ND	5.0	111	112	0.9	101	101	0.0	70 - 130	30
Bromoform	ND	5.0	112	113	0.9	96	96	0.0	70 - 130	30
Bromomethane	ND	5.0	99	95	4.1	96	95	1.0	40 - 160	30
Carbon Disulfide	ND	5.0	120	117	2.5	100	103	3.0	70 - 130	30
Carbon tetrachloride	ND	5.0	108	105	2.8	96	100	4.1	70 - 130	30
Chlorobenzene	ND	5.0	102	100	2.0	94	93	1.1	70 - 130	30
Chloroethane	ND	5.0	109	103	5.7	101	106	4.8	70 - 130	30
Chloroform	ND	5.0	100	98	2.0	94	96	2.1	70 - 130	30
Chloromethane	ND	5.0	90	87	3.4	77	79	2.6	40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	104	103	1.0	95	97	2.1	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	114	114	0.0	100	97	3.0	70 - 130	30
Dibromochloromethane	ND	3.0	118	119	0.8	107	106	0.9	70 - 130	30
Dibromomethane	ND	5.0	102	105	2.9	94	92	2.2	70 - 130	30



# QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dichlorodifluoromethane	ND	5.0	84	81	3.6	70	72	2.8	40 - 160	30
Diethyl ether	ND	5.0	104	106	1.9	95	96	1.0	70 - 130	30
Di-isopropyl ether	ND	5.0	103	102	1.0	97	99	2.0	70 - 130	30
Ethyl tert-butyl ether	ND	5.0	104	103	1.0	96	97	1.0	70 - 130	30
Ethylbenzene	ND	1.0	103	101	2.0	95	95	0.0	70 - 130	30
Hexachlorobutadiene	ND	5.0	112	108	3.6	90	95	5.4	70 - 130	30
Isopropylbenzene	ND	1.0	109	105	3.7	99	103	4.0	70 - 130	30
m&p-Xylene	ND	2.0	101	100	1.0	94	94	0.0	70 - 130	30
Methyl ethyl ketone	ND	5.0	86	89	3.4	79	80	1.3	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	99	100	1.0	71	80	11.9	70 - 130	30
Methylene chloride	ND	5.0	106	105	0.9	93	96	3.2	70 - 130	30
Naphthalene	ND	5.0	119	122	2.5	97	96	1.0	70 - 130	30
n-Butylbenzene	ND	1.0	110	108	1.8	99	100	1.0	70 - 130	30
n-Propylbenzene	ND	1.0	106	104	1.9	99	99	0.0	70 - 130	30
o-Xylene	ND	2.0	107	106	0.9	99	100	1.0	70 - 130	30
p-Isopropyltoluene	ND	1.0	110	107	2.8	100	102	2.0	70 - 130	30
sec-Butylbenzene	ND	1.0	112	109	2.7	104	107	2.8	70 - 130	30
Styrene	ND	5.0	107	105	1.9	97	97	0.0	70 - 130	30
tert-amyl methyl ether	ND	5.0	91	93	2.2	85	85	0.0	70 - 130	30
tert-Butylbenzene	ND	1.0	108	105	2.8	101	103	2.0	70 - 130	30
Tetrachloroethene	ND	5.0	102	101	1.0	91	92	1.1	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	97	99	2.0	92	92	0.0	70 - 130	30
Toluene	ND	1.0	101	102	1.0	93	94	1.1	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	111	106	4.6	98	102	4.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	110	112	1.8	95	93	2.1	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	127	131	3.1	107	100	6.8	70 - 130	30
Trichloroethene	ND	5.0	104	104	0.0	87	92	5.6	70 - 130	30
Trichlorofluoromethane	ND	5.0	101	97	4.0	95	98	3.1	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	104	102	1.9	100	104	3.9	70 - 130	30
Vinyl chloride	ND	5.0	98	96	2.1	89	91	2.2	70 - 130	30
% 1,2-dichlorobenzene-d4	97	%	102	101	1.0	100	101	1.0	70 - 130	30
% Bromofluorobenzene	97	%	101	101	0.0	100	100	0.0	70 - 130	30
% Dibromofluoromethane	96	%	100	101	1.0	100	100	0.0	70 - 130	30
% Toluene-d8	98	%	101	102	1.0	101	102	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 458721 (ug/kg), QC Sample No: CC07238 (CC07220, CC07238 (50X) )

## Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	5.0	104	107	2.8	102	102	0.0	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	98	105	6.9	101	101	0.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	105	113	7.3	98	100	2.0	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	97	103	6.0	94	95	1.1	70 - 130	30
1,1-Dichloroethane	ND	5.0	100	105	4.9	100	100	0.0	70 - 130	30
1,1-Dichloroethene	ND	5.0	103	111	7.5	96	98	2.1	70 - 130	30
1,1-Dichloropropene	ND	5.0	101	108	6.7	108	107	0.9	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	107	110	2.8	114	111	2.7	70 - 130	30
1,2,3-Trichloropropane	ND	5.0	96	100	4.1	91	93	2.2	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	103	106	2.9	111	109	1.8	70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	103	106	2.9	108	107	0.9	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	101	109	7.6	119	102	15.4	70 - 130	30
1,2-Dibromoethane	ND	5.0	100	104	3.9	99	99	0.0	70 - 130	30
1,2-Dichlorobenzene	ND	5.0	99	102	3.0	100	102	2.0	70 - 130	30

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichloroethane	ND	5.0	97	102	5.0	99	100	1.0	70 - 130	30
1,2-Dichloropropane	ND	5.0	101	106	4.8	105	104	1.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	102	106	3.8	108	107	0.9	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	100	103	3.0	104	105	1.0	70 - 130	30
1,3-Dichloropropane	ND	5.0	100	104	3.9	99	99	0.0	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	97	100	3.0	100	101	1.0	70 - 130	30
1,4-dioxane	ND	100	113	110	2.7	104	106	1.9	40 - 160	30
2,2-Dichloropropane	ND	5.0	102	111	8.5	103	104	1.0	70 - 130	30
2-Chlorotoluene	ND	5.0	101	104	2.9	106	106	0.0	70 - 130	30
2-Hexanone	ND	25	93	104	11.2	88	89	1.1	40 - 160	30
2-Isopropyltoluene	ND	5.0	105	109	3.7	108	109	0.9	70 - 130	30
4-Chlorotoluene	ND	5.0	99	101	2.0	102	104	1.9	70 - 130	30
4-Methyl-2-pentanone	ND	25	99	109	9.6	93	98	5.2	40 - 160	30
Acetone	ND	10	70	80	13.3	54	53	1.9	40 - 160	30
Acrylonitrile	ND	5.0	95	110	14.6	91	91	0.0	70 - 130	30
Benzene	ND	1.0	98	101	3.0	102	102	0.0	70 - 130	30
Bromobenzene	ND	5.0	100	102	2.0	102	103	1.0	70 - 130	30
Bromochloromethane	ND	5.0	98	104	5.9	96	97	1.0	70 - 130	30
Bromodichloromethane	ND	5.0	102	109	6.6	98	101	3.0	70 - 130	30
Bromoform	ND	5.0	103	110	6.6	87	91	4.5	70 - 130	30
Bromomethane	ND	5.0	96	100	4.1	114	110	3.6	40 - 160	30
Carbon Disulfide	ND	5.0	112	120	6.9	95	100	5.1	70 - 130	30
Carbon tetrachloride	ND	5.0	98	106	7.8	95	98	3.1	70 - 130	30
Chlorobenzene	ND	5.0	98	101	3.0	101	100	1.0	70 - 130	30
Chloroethane	ND	5.0	104	110	5.6	123	117	5.0	70 - 130	30
Chloroform	ND	5.0	95	100	5.1	94	94	0.0	70 - 130	30
Chloromethane	ND	5.0	79	85	7.3	101	100	1.0	40 - 160	30
cis-1,2-Dichloroethene	ND	5.0	98	105	6.9	99	100	1.0	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	106	112	5.5	106	107	0.9	70 - 130	30
Dibromochloromethane	ND	3.0	111	116	4.4	101	105	3.9	70 - 130	30
Dibromomethane	ND	5.0	98	103	5.0	96	98	2.1	70 - 130	30
Dichlorodifluoromethane	ND	5.0	69	79	13.5	111	113	1.8	40 - 160	30
Diethyl ether	ND	5.0	98	108	9.7	76	79	3.9	70 - 130	30
Di-isopropyl ether	ND	5.0	96	103	7.0	98	98	0.0	70 - 130	30
Ethyl tert-butyl ether	ND	5.0	96	101	5.1	101	101	0.0	70 - 130	30
Ethylbenzene	ND	1.0	98	101	3.0	103	102	1.0	70 - 130	30
Hexachlorobutadiene	ND	5.0	105	110	4.7	110	112	1.8	70 - 130	30
Isopropylbenzene	ND	1.0	102	106	3.8	108	106	1.9	70 - 130	30
m&p-Xylene	ND	2.0	98	102	4.0	102	102	0.0	70 - 130	30
Methyl ethyl ketone	ND	5.0	83	92	10.3	77	76	1.3	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	1.0	96	103	7.0	94	94	0.0	70 - 130	30
Methylene chloride	ND	5.0	98	102	4.0	93	93	0.0	70 - 130	30
Naphthalene	ND	5.0	115	120	4.3	123	118	4.1	70 - 130	30
n-Butylbenzene	ND	1.0	108	115	6.3	114	115	0.9	70 - 130	30
n-Propylbenzene	ND	1.0	101	106	4.8	108	107	0.9	70 - 130	30
o-Xylene	ND	2.0	103	106	2.9	107	107	0.0	70 - 130	30
p-Isopropyltoluene	ND	1.0	105	110	4.7	111	111	0.0	70 - 130	30
sec-Butylbenzene	ND	1.0	107	113	5.5	113	113	0.0	70 - 130	30
Styrene	ND	5.0	103	106	2.9	106	106	0.0	70 - 130	30
tert-amyl methyl ether	ND	5.0	85	91	6.8	90	91	1.1	70 - 130	30
tert-Butylbenzene	ND	1.0	102	106	3.8	107	107	0.0	70 - 130	30
Tetrachloroethene	ND	5.0	95	104	9.0	107	105	1.9	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	89	106	17.4	83	87	4.7	70 - 130	30

## QA/QC Data

SDG I.D.: GCC07212

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Toluene	ND	1.0	97	102	5.0	102	102	0.0	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	105	113	7.3	102	101	1.0	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	103	111	7.5	100	104	3.9	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	119	129	8.1	103	107	3.8	70 - 130	30
Trichloroethene	ND	5.0	99	105	5.9	101	104	2.9	70 - 130	30
Trichlorofluoromethane	ND	5.0	98	108	9.7	114	108	5.4	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	104	116	10.9	98	100	2.0	70 - 130	30
Vinyl chloride	ND	5.0	92	101	9.3	104	105	1.0	70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	101	101	0.0	101	101	0.0	70 - 130	30
% Bromofluorobenzene	97	%	100	102	2.0	103	101	2.0	70 - 130	30
% Dibromofluoromethane	97	%	99	102	3.0	95	95	0.0	70 - 130	30
% Toluene-d8	98	%	102	102	0.0	102	102	0.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director

December 12, 2018

Wednesday, December 12, 2018

Criteria: MA: S1G2, S1G3

State: MA

## Sample Criteria Exceedances Report

### GCC07212 - CLEANPROP

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CC07218	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	23000	2900	7000	7000	ug/Kg
CC07218	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	35000	2900	2000	2000	ug/Kg
CC07218	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	29000	2900	7000	7000	ug/Kg
CC07218	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	38000	2900	7000	7000	ug/Kg
CC07218	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	5100	290	700	700	ug/Kg
CC07218	\$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	23000	2900	7000	7000	ug/Kg
CC07218	\$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	29000	2900	7000	7000	ug/Kg
CC07218	\$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	35000	2900	2000	2000	ug/Kg
CC07218	\$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	38000	2900	7000	7000	ug/Kg
CC07218	\$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	5100	290	700	700	ug/Kg
CC07218	\$PCB_SMR	PCB-1248	MA / Requested PCB RL /	200	82	100	100	ug/Kg
CC07218	\$TPH_SMR	Unidentified	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1300	310	1000	1000	mg/kg
CC07218	\$TPH_SMR	Unidentified	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1300	310	1000	1000	mg/kg
CC07218	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	3020	39	200	200	mg/Kg
CC07218	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	3020	39	200	200	mg/Kg
CC07218	TCLP-PB	TCLP Lead	EPA / 40 CFR 261.24 / Toxicity Characteristics	9.78	0.10	5	5	mg/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

## MassDEP Analytical Protocol Certification Form

**Laboratory Name:** Phoenix Environmental Laboratories, Inc. **Project #:**

**Project Location:** 5737-SOMERVILLE

**RTN:**

**This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]**

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07220, CC07221, CC07222, CC07223, CC07224, CC07225, CC07226, CC07227, CC07228, CC07229, CC07230, CC07231, CC07232, CC07233, CC07234, CC07235, CC07236, CC07237, CC07238, CC07239, CC07240, CC07241, CC07242, CC07243

Matrices: ☐ Groundwater/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

**CAM Protocol (check all that apply below)**

8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input checked="" type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input checked="" type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input checked="" type="checkbox"/>	9012 Total Cyanide/PAC CAM V1 A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>	

**Affirmative responses to questions A through F are required for "Presumptive Certainty" status**

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**Responses to questions G, H and I below is required for "Presumptive Certainty" status**

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350</b>		
H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: ICP, SVOA, VOA Narrations .	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

*All negative responses must be addressed in an attached laboratory narrative.*

**I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.**

Authorized  
Signature:

*Rashmi Makol*

Date: Wednesday, December 12, 2018

Printed Name: Rashmi Makol

Position: Project Manager



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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### Cyanide Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

#### Instrument:

**LACHAT 12/06/18-1** Dustin Harrison, Greg Danielewski, Chemist 12/06/18

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218

The samples were distilled in accordance with the method.

The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequency of one per ten samples.

The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

**LACHAT 12/07/18-1** Dustin Harrison, Greg Danielewski, Chemist 12/07/18

CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

The samples were distilled in accordance with the method.

The initial calibration met criteria.

The calibration check standards (ICV,CCV) were within 15% of true value and were analyzed at a frequency of one per ten samples.

The continuing calibration blanks (ICB,CCB) had concentrations less than the reporting level.

The method blank, laboratory control sample (LCS), and matrix spike were distilled with the samples.

#### QC (Batch Specific):

##### **Batch 458684 (CC07213)**

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218

All LCS recoveries were within 80 - 120 with the following exceptions: None.

Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.

##### **Batch 458723 (CC07219)**

CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 80 - 120 with the following exceptions: None.

Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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### ETPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

#### Instrument:

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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### ETPH Narration

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#### Instrument:

**AU-FID11 12/05/18-1** Jeff Bucko, Chemist 12/05/18

CC07212, CC07213, CC07214, CC07216

The initial calibration (ETPHN14I) RSD for the compound list was less than 30% except for the following compounds: None.  
The continuing calibration %D for the compound list was less than 30% except for the following compounds: None.

**AU-FID11 12/06/18-1** Jeff Bucko, Chemist 12/06/18

CC07215, CC07231, CC07233, CC07234, CC07235

The initial calibration (ETPHN14I) RSD for the compound list was less than 30% except for the following compounds: None.  
The continuing calibration %D for the compound list was less than 30% except for the following compounds: None.

**AU-FID21 12/05/18-1** Jeff Bucko, Chemist 12/05/18

CC07237, CC07239

The initial calibration (ETPHD05I) RSD for the compound list was less than 30% except for the following compounds: None.  
As per section 7.2.3, a discrimination check standard was run and contained the following outliers: C36 21.8%L (20%)  
The continuing calibration %D for the compound list was less than 30% except for the following compounds: None.

**AU-FID21 12/06/18-1** Jeff Bucko, Chemist 12/06/18

CC07221, CC07225, CC07229, CC07230, CC07236

The initial calibration (ETPHD05I) RSD for the compound list was less than 30% except for the following compounds: None.  
The continuing calibration %D for the compound list was less than 30% except for the following compounds:

Samples: CC07221, CC07225, CC07229, CC07230, CC07236

Preceding CC D06A008 - Pentacosane 34%H (30%)

Succeeding CC D06A017 - None.

**AU-FID22 12/05/18-1** Jeff Bucko, Chemist 12/05/18

CC07217, CC07219, CC07222, CC07224, CC07226, CC07228, CC07240, CC07242, CC07243

The initial calibration (ETPHD05I) RSD for the compound list was less than 30% except for the following compounds: None.  
The continuing calibration %D for the compound list was less than 30% except for the following compounds: None.

**AU-FID22 12/06/18-1** Jeff Bucko, Chemist 12/06/18

CC07218

The initial calibration (ETPHD05I) RSD for the compound list was less than 30% except for the following compounds: None.  
The continuing calibration %D for the compound list was less than 30% except for the following compounds: None.

#### QC (Batch Specific):

##### **Batch 458478 (CC07673)**

CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 50 - 150 with the following exceptions: None.

All LCSD recoveries were within 50 - 150 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

The ETPH/DRO LCS has been normalized based on the alkane calibration.

##### **Batch 458508 (CC07212)**

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235

All LCS recoveries were within 50 - 150 with the following exceptions: None.

All LCSD recoveries were within 50 - 150 with the following exceptions: None.

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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### ETPH Narration

#### QC (Batch Specific):

##### Batch 458508 (CC07212)

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

The ETPH/DRO LCS has been normalized based on the alkane calibration.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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### Mercury Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

#### Instrument:

##### MERLIN 12/06/18 08:21

Rick Schweitzer, Chemist 12/06/18

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

The method preparation blank contains all of the acids and reagents as the samples; the instrument blanks do not.

The initial calibration met all criteria including a standard run at or below the reporting level.

All calibration verification standards (ICV, CCV) met criteria.

All calibration blank verification standards (ICB, CCB) met criteria.

The matrix spike sample is used to identify spectral interference for each batch of samples, if within 85-115%, no interference is observed and no further action is taken.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

#### QC (Batch Specific):

##### Batch 458691 (CC07214)

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All LCSD recoveries were within 75 - 125 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

##### Batch 458692 (CC08376)

CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All LCSD recoveries were within 75 - 125 with the following exceptions: None.

All LCS/LCSD RPDs were less than 20% with the following exceptions: None.

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%

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### ICP Metals Narration





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## Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? No.

**QC Batch 458502 (Samples: CC07237, CC07239, CC07240, CC07242, CC07243): -----**

**The Sample/Duplicate RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Lead)**

**QC Batch 458896 (Samples: CC07222): -----**

**The Sample/Duplicate RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Lead)**

**QC Batch 459183 (Samples: CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233): -----**

**The Sample/Duplicate RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Lead)**

**QC Batch 459474 (Samples: CC07236): -----**

**The Sample/Duplicate RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (Arsenic)**

### Instrument:

#### ARCOS 12/05/18 08:39

Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 12/05/

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

#### ARCOS 12/06/18 10:07

Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 12/06/

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

#### ARCOS 12/07/18 11:20

Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 12/07/

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07225

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.



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## Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### ICP Metals Narration

#### Instrument:

##### **ARCOS 12/07/18 11:20**

Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 12/07/

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07225

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

##### **ARCOS 12/10/18 10:19**

Cindy Pearce, Emily Kolominskaya, Tina Hall, Chemist 12/10/

CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07237, CC07239, CC07240, CC07242, CC07243

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

##### **ARCOS 12/12/18 08:02**

Emily Kolominskaya, Tina Hall, Chemist 12/12/18

CC07236

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

#### QC (Batch Specific):

##### **Batch 458387 (CC07212)**

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235

All LCS recoveries were within 75 - 125 with the following exceptions: None.

##### **Batch 458502 (CC07236)**

CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 75 - 125 with the following exceptions: None.

##### **Batch 458895 (CC09605)**

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221

All LCS recoveries were within 75 - 125 with the following exceptions: None.

##### **Batch 458896 (CC08863)**

CC07222

All LCS recoveries were within 75 - 125 with the following exceptions: None.

##### **Batch 459183 (CC08378)**

CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233

All LCS recoveries were within 75 - 125 with the following exceptions: None.



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## Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### ICP Metals Narration

#### QC (Batch Specific):

##### Batch 459184 (CC09928)

CC07234, CC07235, CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 75 - 125 with the following exceptions: None.

##### Batch 459474 (CC11933)

CC07236

All LCS recoveries were within 75 - 125 with the following exceptions: None.

##### Batch 459546 (CC11754)

CC07236

All LCS recoveries were within 75 - 125 with the following exceptions: None.

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### PCB Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

#### Instrument:

##### AU-ECD1 12/06/18-1

Adam Werner, Chemist 12/06/18

CC07212, CC07213, CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

The initial calibration (PC1203AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC1203BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.

##### AU-ECD24 12/10/18-1

Adam Werner, Chemist 12/10/18

CC07219

The initial calibration (PC1024AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC1024BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.

##### AU-ECD3 12/06/18-1

Adam Werner, Chemist 12/06/18

CC07214, CC07215, CC07216, CC07217

The initial calibration (PC1130AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC1130BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.

##### AU-ECD3 12/07/18-1

Adam Werner, Chemist 12/07/18

CC07218

The initial calibration (PC1130AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC1130BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.

##### AU-ECD6 12/06/18-1

Adam Werner, Chemist 12/06/18

CC07230, CC07231, CC07233, CC07234, CC07235

The initial calibration (PC1204AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC1204BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.



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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### PCB Narration

#### Instrument:

#### QC (Batch Specific):

##### Batch 458471 (CC07532)

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

##### Batch 458634 (CC07221)

CC07221, CC07222, CC07224, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

##### Batch 459004 (CC10400)

CC07219

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

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### SVOA Narration



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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### SVOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

**QC Batch 458467 (Samples: CC07212, CC07213, CC07214, CC07215, CC07216, CC07217): -----**

**One or more analytes is below the method criteria. A low bias for these analytes is possible. (2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol)**

**The LCS/LCSD recovery is acceptable. One or more analytes in the site specific matrix spike recovery is below the method criteria, therefore a low bias is likely. (Hexachlorocyclopentadiene)**

**The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (2,4-Dinitrophenol, Benzoic Acid)**

**The QC recoveries for one or more analytes is below the method criteria. A slight low bias is likely. (Benzoic Acid)**

**QC Batch 458501 (Samples: CC07218, CC07219, CC07221, CC07222, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243): -----**

**The LCS/LCSD recovery is acceptable. One or more analytes in the site specific matrix spike recovery is below the method criteria, therefore a low bias is likely. (Pentachlorophenol)**

**The MS/MSD RPD exceeds the method criteria for one or more analytes, therefore there may be variability in the reported result. (4,6-Dinitro-2-methylphenol)**

**The QC recoveries for one or more analytes is below the method criteria. A slight low bias is likely. (4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, Benzoic Acid)**

**QC Batch 458779 (Samples: CC07224): -----**

**The QC recoveries for one or more analytes is below the method criteria. A slight low bias is likely. (2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Benzoic Acid)**

**The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (3&4-Methylphenol (m&p-cresol))**

#### **Instrument:**

##### **CHEM06 12/05/18-1**

Wes Bryon, Chemist 12/05/18

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM06/6\_SPLIT\_1128):

[PCTMET]% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet recommended response factors: 2-Nitrophenol 0.062 (0.1), Hexachlorobenzene 0.089 (0.1)

The following compounds did not meet a minimum response factors: None.

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**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

---

### SVOA Narration

---

#### Instrument:

**CHEM06 12/05/18-1** Wes Bryon, Chemist 12/05/18  
CC07212, CC07213, CC07214, CC07215, CC07216, CC07217

Continuing Calibration Verification (CHEM06/1205\_08-6\_SPLIT\_1128) (MCP Compliance):  
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.  
98% of target compounds met criteria.  
The following compounds did not meet % deviation criteria: Bis(2-chloroisopropyl)ether 26%L (20%)  
The following compounds did not meet maximum % deviations: None.  
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.060 (0.1), Hexachlorobenzene 0.085 (0.1)  
The following compounds did not meet minimum response factors: None.

**CHEM06 12/06/18-1** Wes Bryon, Chemist 12/06/18  
CC07224

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.  
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM06/6\_SPLIT\_1128):  
[PCTMET]% of target compounds met criteria.  
The following compounds had %RSDs >20%: None.  
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.062 (0.1), Hexachlorobenzene 0.089 (0.1)  
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM06/1206\_08-6\_SPLIT\_1128) (MCP Compliance):  
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.  
95% of target compounds met criteria.  
The following compounds did not meet % deviation criteria: % 2,4,6-Tribromophenol 24%L (20%), Bis(2-chloroisopropyl)ether 29%L (20%)  
The following compounds did not meet maximum % deviations: None.  
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.053 (0.1), Hexachlorobenzene 0.080 (0.1)  
The following compounds did not meet minimum response factors: None.

**CHEM19 12/06/18-1** Wes Bryon, Chemist 12/06/18  
CC07218

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.  
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM19/19\_SPLIT\_1129):  
[PCTMET]% of target compounds met criteria.  
The following compounds had %RSDs >20%: None.  
The following compounds did not meet recommended response factors: None.  
The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM19/1206\_03-19\_SPLIT\_1129) (MCP Compliance):

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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### SVOA Narration

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#### Instrument:

##### CHEM19 12/06/18-1

Wes Bryon, Chemist 12/06/18

CC07218

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

99% of target compounds met criteria.

The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.

##### CHEM29 12/05/18-2

Wes Bryon, Chemist 12/05/18

CC07218, CC07219, CC07221, CC07222, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM29/29\_SPLIT\_1129):

[PCTMET]% of target compounds met criteria.

The following compounds had %RSDs >20%: 2,4-Dinitrophenol 26% (20%), 4,6-Dinitro-2-methylphenol 24% (20%),

Pentachlorophenol 28% (20%)

The following compounds did not meet recommended response factors: 2-Nitrophenol 0.065 (0.1), Hexachlorobenzene 0.097 (0.1)

The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM29/1205\_22-29\_SPLIT\_1129) (MCP Compliance):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

97% of target compounds met criteria.

The following compounds did not meet % deviation criteria: 2,4-Dinitrophenol 24%L (20%), Benzoic acid 28%L (20%),

Pentachlorophenol 36%L (20%)

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: 2-Nitrophenol 0.072 (0.1)

The following compounds did not meet minimum response factors: None.

#### QC (Batch Specific):

##### Batch 458467 (CC07213)

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(22%), Benzoic Acid(<10%)

All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(20%), Benzoic Acid(<10%)

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

##### Batch 458501 (CC07222)

CC07218, CC07219, CC07221, CC07222, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### SVOA Narration

#### QC (Batch Specific):

##### Batch 458501 (CC07222)

CC07218, CC07219, CC07221, CC07222, CC07225, CC07226, CC07228, CC07229, CC07230, CC07231, CC07233, CC07234, CC07235, CC07236, CC07237, CC07239, CC07240, CC07242, CC07243

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(10%), Benzoic Acid(<10%)

All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(12%), Benzoic Acid(<10%)

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

##### Batch 458779 (CC08777)

CC07224

All LCS recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(24%), Benzoic Acid(<10%)

All LCSD recoveries were within 30 - 130 with the following exceptions: 2,4-Dinitrophenol(<10%), 4,6-Dinitro-2-methylphenol(19%), Benzoic Acid(<10%)

All LCS/LCSD RPDs were less than 30% with the following exceptions: 3&4-Methylphenol (m&p-cresol)(41.4%)

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

---

### VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

**QC Batch 458441 (Samples: CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07223, CC07227, CC07232, CC07241): -----**

**The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (trans-1,4-dichloro-2-butene)**

#### Instrument:

##### CHEM14 12/04/18-2

Jane Li, Chemist 12/04/18

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07223, CC07227, CC07232, CC07241

Initial Calibration Evaluation (CHEM14/vt-1204P):

[PCTMET]% of target compounds met criteria.

The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 31% (20%), Acetone 38% (20%), Bromoform 25% (20%), Chloroethane 25% (20%), Dibromochloromethane 22% (20%), Naphthalene 22% (20%), trans-1,3-Dichloropropene 21% (20%), trans-1,4-dichloro-2-butene 33% (20%)

The following compounds did not meet recommended response factors: None.

The following compounds did not meet a minimum response factors: None.





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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

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### VOA Narration

#### Instrument:

##### CHEM14 12/04/18-2

Jane Li, Chemist 12/04/18

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07223, CC07227, CC07232, CC07241

Continuing Calibration Verification (CHEM14/1204\_21-vt-1204P) (MCP Compliance):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

99% of target compounds met criteria.

The following compounds did not meet % deviation criteria: trans-1,4-dichloro-2-butene 25%H (20%)

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: Acetone 0.094 (0.1)

The following compounds did not meet minimum response factors: None.

##### CHEM14 12/05/18-1

Jane Li, Chemist 12/05/18

CC07220, CC07238

Initial Calibration Evaluation (CHEM14/vt-1204P):

[PCTMET]% of target compounds met criteria.

The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 31% (20%), Acetone 38% (20%), Bromoform 25% (20%), Chloroethane 25% (20%), Dibromochloromethane 22% (20%), Naphthalene 22% (20%), trans-1,3-Dichloropropene 21% (20%), trans-1,4-dichloro-2-butene 33% (20%)

The following compounds did not meet recommended response factors: None.

The following compounds did not meet a minimum response factors: None.

Continuing Calibration Verification (CHEM14/1205\_02-vt-1204P) (MCP Compliance):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

96% of target compounds met criteria.

The following compounds did not meet % deviation criteria: Acetone 22%L (20%), Dichlorodifluoromethane 22%L (20%), trans-1,4-dichloro-2-butene 23%H (20%)

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: Acetone 0.092 (0.1)

The following compounds did not meet minimum response factors: None.

#### QC (Batch Specific):

##### Batch 458441 (CC06736)

CC07212, CC07213, CC07214, CC07215, CC07216, CC07217, CC07218, CC07219, CC07221, CC07222, CC07223, CC07227, CC07232, CC07241

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: trans-1,4-dichloro-2-butene(131%)

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

##### Batch 458721 (CC07238)

CC07220, CC07238

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.



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## MCP Certification Report

December 12, 2018

SDG I.D.: GCC07212

---

### ***VOA Narration***

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.





CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: info@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-8726 5737

Customer: CLEAN PROPERTIES INC  
Address: 111 BOSTON POST ROAD  
SUITE 214B  
SUDBURY, MA 01776

Project: 5581 - SOMERVILLE  
Report to: MARCIA BERGER  
Invoice to: MARCIA BERGER  
QUOTE #

Temp 31.2 C Pg 1 of 1  
Data Delivery/Contact Options:  
Fax: N/A 800 977 1982  
Phone: 860 645 8726  
Email: data@cleanproperties.com

Cooler: Yes ☒ No ☐  
Coolant: IPK ☒ ICE ☐ No ☐

PHOENIX USE ONLY	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
07222	CP11-3.5 ft	S	12/3	10:45 AM	Disposal Package
07223	*CP11-6.5 ft	S	12/3		Disposal Package
07224	CP11-7.5 ft	S	12/3		Disposal Package
07225	CP12-3 ft	S	12/3		Disposal Package
07226	CP12-7 ft	S	12/3		Disposal Package
07227	*CP13-3 ft	S	12/3		Disposal Package
07228	CP13-7 ft	S	12/3		Disposal Package
07229	CP13-9 ft	S	12/3		Disposal Package
07230	CP14-5.5 ft	S	12/3		Disposal Package
07231	CP14-9 ft	S	12/3		Disposal Package

Relinquished by: <u>M. Berger</u>	Accepted by: <u>[Signature]</u>	Date: 12-4-18	Time: 15:35	RI: <input checked="" type="checkbox"/> Direct Exposure (Residential) <input type="checkbox"/> GW	CT: <input type="checkbox"/> RCP Cert <input type="checkbox"/> GW Protection <input type="checkbox"/> SW Protection <input type="checkbox"/> GA Mobility <input type="checkbox"/> GB Mobility <input type="checkbox"/> Residential DEC <input type="checkbox"/> ILC DEC <input type="checkbox"/> Other	MA: <input type="checkbox"/> MCP Certification <input checked="" type="checkbox"/> GW-1 <input checked="" type="checkbox"/> GW-2 <input type="checkbox"/> GW-3 <input type="checkbox"/> S-1 <input type="checkbox"/> S-2 <input type="checkbox"/> S-3 <input type="checkbox"/> MWRA eSMART <input type="checkbox"/> Other	Data Format: <input checked="" type="checkbox"/> Excel <input type="checkbox"/> PDF <input type="checkbox"/> GIS/Key <input type="checkbox"/> EQUIS <input type="checkbox"/> Other		
Comments: Special Requirements or Regulations: PCB detection limit 0.1 mg/kg * Hold for disposal package test CP11-6.5 ft CP13-3 ft				Turnaround: <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input checked="" type="checkbox"/> 3 Days <input type="checkbox"/> Standard <input type="checkbox"/> Other				State where samples were collected: MA	
								* SURCHARGE APPLIES	



6cc07a1a

Shannon Wilhelm

**From:** Sarah Bell  
**Sent:** Wednesday, December 05, 2018 02:24 PM  
**To:** Shannon Wilhelm  
**Subject:** FW: Comm 97 GCC07212  
**Importance:** High

Sarah Bell  
Client Services - Project Manager  
Accounts Receivable  
Phoenix Environmental Laboratories  
587 East Middle Turnpike  
Manchester, CT 06040  
Ph: 1-860-645-1102

---

**From:** mporter@cleanproperties.com [mailto:mporter@cleanproperties.com]  
**Sent:** Wednesday, December 05, 2018 2:11 PM  
**To:** Sarah Bell  
**Subject:** RE: Comm 97 GCC07212  
**Importance:** High

That is the start of what we want (there were some additional things which we couldn't iron out in the office)  
Here is the additional info we want:  
MCP 14 metals (instead of RCRA 5)  
pH  
Reactivity  
Conductivity

Also, as commented on the chains, the PCB reporting limit can't be higher than 0.1 ppm (I'm fairly certain that's normally what the reporting limit is, but my boss was very insistent about it).

As far as I am aware, that is what we meant by Disposal Package.

Mitchell Porter  
Environmental Scientist  
Clean Properties, Inc.  
Mobile: 774-275-4916  
Work: 800-977-1982  
Email: mporter@cleanproperties.com

GCC 07212

**Clean Properties Inc.**  
**Environmental Assessment & Cleanup**



----- Original Message -----  
 Subject: Comm 97 GCC07212

From: Sarah Bell <sarah@phoenixlabs.com>

Date: Wed, December 05, 2018 12:02 pm

To: "importer@cleanproperties.com" <importer@cleanproperties.com>

Cc: Shannon Wilhelm <shannon@phoenixlabs.com>

Attached

VOC

PCB

RCRA 5 Metals

TPH

Semivolatiles.

Above is the Comm 97

GCC 07212

Shannon Wilhelm

**From:** mporter@cleanproperties.com  
**Sent:** Wednesday, December 05, 2018 03:08 PM  
**To:** Shannon Wilhelm  
**Subject:** RE: Comm 97 GCC07212

That is correct there were no soil jars filled at that location. I apologize if the Chain of Custody did not reflect this.

Mitchell Porter  
 Environmental Scientist  
 Clean Properties, Inc.  
 Mobile: 774-275-4916  
 Work: 800-977-1982  
 Email: mporter@cleanproperties.com



----- Original Message -----  
**Subject:** RE: Comm 97 GCC07212  
**From:** Shannon Wilhelm <shannon@phoenixlabs.com>  
**Date:** Wed, December 05, 2018 12:48 pm  
**To:** Sarah Bell <sarah@phoenixlabs.com>, "mporter@cleanproperties.com"  
 <mporter@cleanproperties.com>

Sample with id CP 7 - 2 FT we only received voa vials so will only be able to report VOC's

Thank you,

Shannon Wilhelm  
 Client Services Representative  
 Phoenix Environmental Laboratories  
 587 East Middle Turnpike  
 Manchester CT 06040  
 860-645-1102

-----Original Message-----  
**From:** Sarah Bell  
**Sent:** Wednesday, December 05, 2018 2:02 PM  
**To:** mporter@cleanproperties.com  
**CC:** Shannon Wilhelm  
**Subject:** Comm 97 GCC07212  
**Importance:** High

Attached

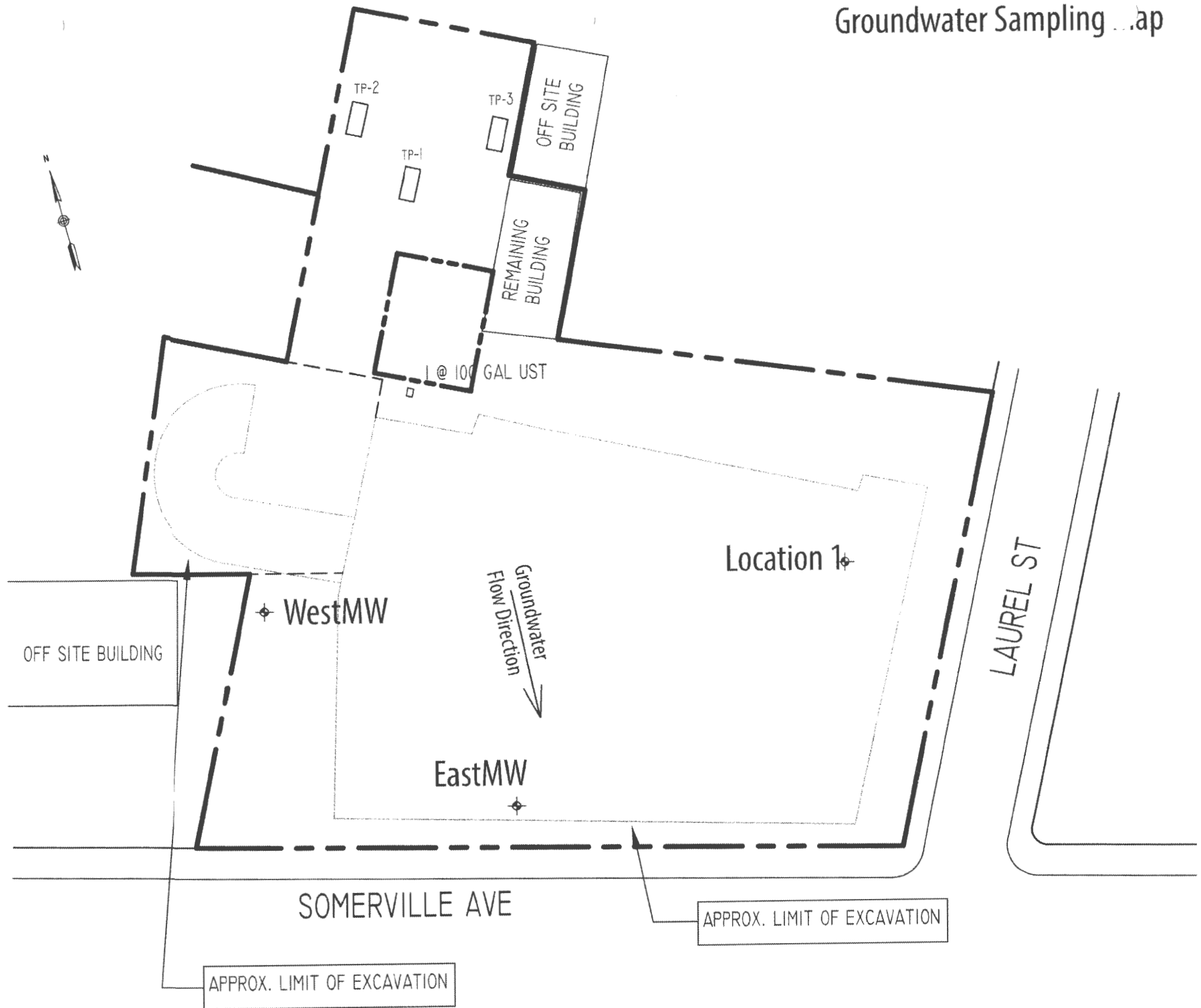




**APPENDIX E:**

**LABORATORY DATA REPORT – GROUNDWATER (CLEAN PROPERTIES,  
INC.**

# Groundwater Sampling Map



**Table 2**  
Groundwater Test Results  
515 SOMERVILLE AVE.,  
SOMERVILLE, MA

Table 2 Groundwater Test Results 515 SOMERVILLE AVE., SOMERVILLE, MA		Collection Date Sample ID Matrix Units	12/17/2019 WEST MW Ground Water ResultRL		12/17/2019 EAST MW Ground Water ResultRL		12/13/2019 LOCATION 1 Ground Water ResultRL	
Miscellaneous/Inorganics								
pH		pH Units	6.38	1.00	7.49	1.00	NT	NT
Metals, Total								
Antimony		mg/L	< 0.005	0.005	< 0.005	0.005	NT	NT
Arsenic		mg/L	0.018	0.004	0.087	0.004	NT	NT
Cadmium		mg/L	0.004	0.001	0.011	0.001	NT	NT
Chromium		mg/L	0.026	0.001	0.142	0.001	NT	NT
Copper		mg/L	0.07	0.005	1.29	0.005	NT	NT
Lead		mg/L	0.051	0.002	2.19	0.020	NT	NT
Mercury		mg/L	< 0.002	0.002	< 0.002	0.002	NT	NT
Nickel		mg/L	0.023	0.001	0.142	0.001	NT	NT
Selenium		mg/L	< 0.010	0.010	< 0.010	0.010	NT	NT
Silver		mg/L	< 0.001	0.001	< 0.001	0.001	NT	NT
Zinc		mg/L	0.362	0.004	1.78	0.004	NT	NT
PCBs By E608.3								
PCB-1016		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1221		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1232		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1242		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1248		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1254		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1260		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1262		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
PCB-1268		ug/L	< 0.056	0.056	< 0.071	0.071	NT	NT
Volatiles By E624.1								
1,1,1-Trichloroethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,1,2,2-tetrachloroethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,1,2-Trichloroethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,1-Dichloroethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,1-Dichloroethene		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,2-Dichlorobenzene		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,2-Dichloroethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,2-Dichloropropane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,3-Dichlorobenzene		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
1,4-Dichlorobenzene		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Benzene		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Bromodichloromethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Bromoform		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Bromomethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Carbon tetrachloride		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Chlorobenzene		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Chloroethane		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Chloroform		ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Chloromethane		ug/L	< 0.50	0.50	< 0.50	0.50	1.8	0.5

**Table 2**  
Groundwater Test Results  
515 SOMERVILLE AVE.,  
SOMERVILLE, MA

	Collection Date Sample ID Matrix Units	12/17/2019 WEST MW Ground Water		12/17/2019 EAST MW Ground Water		12/13/2019 LOCATION 1 Ground Water	
		Result	RL	Result	RL	Result	RL
cis-1,2-Dichloroethene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
cis-1,3-Dichloropropene	ug/L	< 0.40	0.40	< 0.40	0.40	< 0.40	0.4
Dibromochloromethane	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Ethylbenzene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
m&p-Xylene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Methyl tert-butyl ether (MTBE)	ug/L	< 1.0	1.0	< 1.0	1.0	< 1.0	1
Methylene chloride	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
o-Xylene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Tetrachloroethene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Toluene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
trans-1,2-Dichloroethene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
trans-1,3-Dichloropropene	ug/L	< 0.40	0.40	< 0.40	0.40	< 0.40	0.4
Trichloroethene	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Trichlorofluoromethane	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
Vinyl chloride	ug/L	< 0.50	0.50	< 0.50	0.50	< 0.50	0.5
<b>Semivolatiles By E025.1/E025.1SM</b>							
1,2,4-Trichlorobenzene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
1,2-Dichlorobenzene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
1,2-Diphenylhydrazine	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
1,3-Dichlorobenzene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
1,4-Dichlorobenzene	ug/L	< 5.0	5.0	< 7.2	7.2	< 5.0	5
2,4,5-Trichlorophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,4,6-Trichlorophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,4-Dichlorophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,4-Dimethylphenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,4-Dinitrophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,4-Dinitrotoluene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,6-Dichlorophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2,6-Dinitrotoluene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2-Chloronaphthalene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2-Chlorophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2-Methylnaphthalene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2-Methylphenol (o-cresol)	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
2-Nitroaniline	ug/L	< 10	10	< 14	14	< 20	20
2-Nitrophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
3&4-Methylphenol (m&p-cresol)	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
3,3'-Dichlorobenzidine	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
3-Nitroaniline	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4,6-Dinitro-2-methylphenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4-Bromophenyl phenyl ether	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4-Chloro-3-methylphenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4-Chloroaniline	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4-Chlorophenyl phenyl ether	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4-Nitroaniline	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
4-Nitrophenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Anthracene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Benzidine	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Benzoic acid	ug/L	< 10	10	< 14	14	< 20	20
Benzyl alcohol	ug/L	< 10	10	< 14	14	< 20	20
Benzyl butyl phthalate	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Bis(2-chloroethoxy)methane	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10

**Table 2**  
Groundwater Test Results  
515 SOMERVILLE AVE.,  
SOMERVILLE, MA

	Collection Date Sample ID Matrix Units	12/17/2019 WEST MW Ground Water		12/17/2019 EAST MW Ground Water		12/13/2019 LOCATION 1 Ground Water	
		Result	RL	Result	RL	Result	RL
Bis(2-chloroethyl)ether	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Bis(2-chloroisopropyl)ether	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Bis(2-ethylhexyl)phthalate	ug/L	< 1.0	1.0	< 1.4	1.4	3.8	2
Dibenzofuran	ug/L	< 1.0	1.0	< 1.4	1.4	< 2.0	2
Diethyl phthalate	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Dimethylphthalate	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Di-n-butylphthalate	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Di-n-octylphthalate	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Fluoranthene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Fluorene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Hexachloroethane	ug/L	< 1.0	1.0	< 1.4	1.4	< 2.0	2
Isophorone	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Naphthalene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
N-Nitrosodi-n-propylamine	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
N-Nitrosodiphenylamine	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Phenol	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
Pyrene	ug/L	< 5.0	5.0	< 7.2	7.2	< 10	10
<b>Semivolatiles by (SIM) by E625.1/E625.1SIM</b>							
Acenaphthene	ug/L	< 0.05	0.05	< 0.07	0.07	< 0.10	0.1
Acenaphthylene	ug/L	< 0.05	0.05	< 0.07	0.07	< 0.10	0.1
Benzo(a)anthracene	ug/L	< 0.04	0.04	1.1	0.06	< 0.08	0.08
Benzo(a)pyrene	ug/L	< 0.05	0.05	1.1	0.07	< 0.10	0.1
Benzo(b)fluoranthene	ug/L	< 0.05	0.05	0.89	0.07	< 0.10	0.1
Benzo(g,h,i)perylene	ug/L	< 0.10	0.10	0.75	0.14	< 0.20	0.2
Benzo(k)fluoranthene	ug/L	< 0.05	0.05	0.96	0.07	< 0.10	0.1
Chrysene	ug/L	< 0.05	0.05	1.1	0.07	< 0.10	0.1
Dibenz(a,h)anthracene	ug/L	< 0.02	0.02	0.11	0.03	< 0.04	0.04
Hexachlorobenzene	ug/L	< 0.06	0.06	< 0.09	0.09	< 0.12	0.12
Hexachlorobutadiene	ug/L	< 0.10	0.10	< 0.14	0.14	< 0.20	0.2
Hexachlorocyclopentadiene	ug/L	< 0.10	0.10	< 0.14	0.14	< 0.20	0.2
Indeno(1,2,3-c,d)pyrene	ug/L	< 0.05	0.05	0.93	0.07	< 0.10	0.1
Nitrobenzene	ug/L	< 0.10	0.10	< 0.14	0.14	< 0.20	0.2
N-Nitrosodimethylamine	ug/L	< 0.05	0.05	< 0.07	0.07	< 0.10	0.1
Pentachlorophenol	ug/L	< 0.05	0.05	< 0.07	0.07	< 0.10	0.1
Phenanthrene	ug/L	< 0.05	0.05	0.93	0.07	< 0.10	0.1
Pyridine	ug/L	< 0.50	0.50	< 0.72	0.72	< 1.0	1
<b>Pesticides By E608.3</b>							
4,4' -DDD	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
4,4' -DDE	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
4,4' -DDT	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
a-BHC	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
a-chlordane	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Aldrin	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
b-BHC	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Chlordane	ug/L	< 0.28	0.28	< 0.35	0.35	NT	NT
d-BHC	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Dieldrin	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Endosulfan I	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT

**Table 2**  
Groundwater Test Results  
515 SOMERVILLE AVE.,  
SOMERVILLE, MA

	Collection Date Sample ID Matrix Units	12/17/2019 WEST MW Ground Water		12/17/2019 EAST MW Ground Water		12/13/2019 LOCATION 1 Ground Water	
		Result	RL	Result	RL	Result	RL
Endosulfan II	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Endosulfan sulfate	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Endrin	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Endrin aldehyde	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Endrin ketone	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
g-BHC	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
g-chlordane	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Heptachlor	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Heptachlor epoxide	ug/L	< 0.056	0.056	< 0.070	0.070	NT	NT
Methoxychlor	ug/L	< 0.56	0.56	< 0.70	0.70	NT	NT
Toxaphene	ug/L	< 1.1	1.1	< 1.4	1.4	NT	NT
<b>Acrolein, Acrylonitrile, 2 CEVE By E824.1 As Is</b>							
2-Chloroethyl vinyl ether	ug/L	< 5.0	5.0	< 5.0	5.0	NT	NT
Acrolein	ug/L	< 5.0	5.0	< 5.0	5.0	NT	NT
Acrylonitrile	ug/L	< 5.0	5.0	< 5.0	5.0	NT	NT

Result Detected







**Tuesday, December 24, 2019**

**Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776**

**Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
SDG ID: GCE90154  
Sample ID#s: CE90154 - CE90155**

**This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.**

**This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.**

**A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.**

**If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.**

**Sincerely yours,**

A handwritten signature in cursive script that reads "Phyllis Shiller".

**Phyllis Shiller**

**Laboratory Director**

**NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B**

**NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
UT Lab Registration #CT00007  
VT Lab Registration #VT11301**







Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

December 24, 2019

SDG I.D.: GCE90154

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA

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Client Id	Lab Id	Matrix
WEST MW	CE90154	GROUND WATER
EAST MW	CE90155	GROUND WATER



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: GROUND WATER  
Location Code: CLEANPROP  
Rush Request: 24 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

Date Time

12/17/19  
12/18/19 16:36

### Laboratory Data

SDG ID: GCE90154  
Phoenix ID: CE90154

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: WEST MW

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001		mg/L	1	12/20/19	EK	SW6010D
Arsenic	0.018	0.004		mg/L	1	12/20/19	EK	SW6010D
Cadmium	0.004	0.001		mg/L	1	12/20/19	EK	SW6010D
Chromium	0.026	0.001		mg/L	1	12/20/19	EK	SW6010D
Copper	0.070	0.005		mg/L	1	12/20/19	EK	SW6010D
Mercury	< 0.002	0.002		mg/L	1	12/19/19	RS	SW7470A
Nickel	0.023	0.001		mg/L	1	12/20/19	EK	SW6010D
Lead	0.051	0.002		mg/L	1	12/20/19	EK	SW6010D
Antimony	< 0.005	0.005		mg/L	1	12/20/19	EK	SW6010D
Selenium	< 0.010	0.010		mg/L	1	12/20/19	EK	SW6010D
Zinc	0.362	0.004		mg/L	1	12/20/19	EK	SW6010D
pH	6.38	1.00		pH Units	1	12/19/19 00:28	AP	SM4500-H B-11
Mercury Digestion	Completed					12/19/19	LS/LS	SW7470A
PCB Extraction	Completed					12/18/19		E608.3
Extraction for Pest (2 Liter)	Completed					12/18/19		E608.3
Semi-Volatile Extraction	Completed					12/18/19		E625.1
Total Metals Digestion	Completed					12/19/19	AG	

### Polychlorinated Biphenyls

PCB-1016	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1221	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1232	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1242	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1248	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1254	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1260	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1262	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3
PCB-1268	ND	0.056	0.056	ug/L	1	12/19/19	SC	E608.3

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<b><u>QA/QC Surrogates</u></b>								
% DCBP	82			%	1	12/19/19	SC	30 - 150 %
% DCBP (Confirmation)	83			%	1	12/19/19	SC	30 - 150 %
% TCMX	73			%	1	12/19/19	SC	30 - 150 %
% TCMX (Confirmation)	69			%	1	12/19/19	SC	30 - 150 %
<b><u>Pesticides</u></b>								
4,4' -DDD	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
4,4' -DDE	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
4,4' -DDT	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
a-BHC	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
a-chlordane	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Aldrin	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
b-BHC	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Chlordane	ND	0.28	0.28	ug/L	5	12/19/19	CG	E608.3
d-BHC	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Dieldrin	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Endosulfan I	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Endosulfan II	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Endosulfan sulfate	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Endrin	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Endrin aldehyde	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Endrin ketone	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
g-BHC	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
g-chlordane	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Heptachlor	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Heptachlor epoxide	ND	0.056	0.056	ug/L	5	12/19/19	CG	E608.3
Methoxychlor	ND	0.56	0.56	ug/L	5	12/19/19	CG	E608.3
Toxaphene	ND	1.1	1.1	ug/L	5	12/19/19	CG	E608.3
<b><u>QA/QC Surrogates</u></b>								
% DCBP	122			%	5	12/19/19	CG	40 - 140 %
% DCBP (Confirmation)	95			%	5	12/19/19	CG	40 - 140 %
% TCMX	88			%	5	12/19/19	CG	40 - 140 %
% TCMX (Confirmation)	88			%	5	12/19/19	CG	40 - 140 %
<b><u>Acrolein, Acrylonitrile, 2 CEVE</u></b>								
2-Chloroethyl vinyl ether	ND	5.0	5.0	ug/L	1	12/18/19	MH	E624.1 As is
Acrolein	ND	5.0	1.0	ug/L	1	12/18/19	MH	E624.1 As is
Acrylonitrile	ND	5.0	0.50	ug/L	1	12/18/19	MH	E624.1 As is
<b><u>Volatiles</u></b>								
1,1,1-Trichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1,2,2-tetrachloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1,2-Trichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1-Dichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1-Dichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,2-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,2-Dichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,2-Dichloropropane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,3-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
1,4-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Benzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Bromodichloromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Bromoform	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Bromomethane	ND	0.50	0.50	ug/L	1	12/18/19	MH	E624.1
Carbon tetrachloride	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chloroform	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chloromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
cis-1,2-Dichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
cis-1,3-Dichloropropene	ND	0.40	0.25	ug/L	1	12/18/19	MH	E624.1
Dibromochloromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Ethylbenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
m&p-Xylene	ND	0.50	0.42	ug/L	1	12/18/19	MH	E624.1
Methyl tert-butyl ether (MTBE)	ND	1.0	0.50	ug/L	1	12/18/19	MH	E624.1
Methylene chloride	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
o-Xylene	ND	0.50	0.45	ug/L	1	12/18/19	MH	E624.1
Tetrachloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Toluene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
trans-1,2-Dichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
trans-1,3-Dichloropropene	ND	0.40	0.25	ug/L	1	12/18/19	MH	E624.1
Trichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Trichlorofluoromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Vinyl chloride	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
<b><u>QA/QC Surrogates</u></b>								
% 1,2-dichlorobenzene-d4	103			%	1	12/18/19	MH	70 - 130 %
% Bromofluorobenzene	90			%	1	12/18/19	MH	70 - 130 %
% Dibromofluoromethane	108			%	1	12/18/19	MH	70 - 130 %
% Toluene-d8	104			%	1	12/18/19	MH	70 - 130 %
<b><u>Semivolatiles by (SIM)</u></b>								
Acenaphthene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Acenaphthylene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzo(a)anthracene	ND	0.04	0.04	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzo(a)pyrene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzo(b)fluoranthene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzo(g,h,i)perylene	ND	0.10	0.10	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzo(k)fluoranthene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Chrysene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Dibenz(a,h)anthracene	ND	0.02	0.01	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Hexachlorobenzene	ND	0.06	0.06	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Hexachlorobutadiene	ND	0.10	0.10	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Hexachlorocyclopentadiene	ND	0.10	0.10	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Indeno(1,2,3-c,d)pyrene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Nitrobenzene	ND	0.10	0.10	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
N-Nitrosodimethylamine	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Pentachlorophenol	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Phenanthrene	ND	0.05	0.05	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Pyridine	ND	0.50	1.2	ug/L	1	12/19/19	AW	E625.1/E625.1SIM

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<b><u>QA/QC Surrogates</u></b>								
% 2,4,6-Tribromophenol	55			%	1	12/19/19	AW	15 - 110 %
% 2-Fluorobiphenyl	54			%	1	12/19/19	AW	40 - 140 %
% 2-Fluorophenol	41			%	1	12/19/19	AW	15 - 110 %
% Nitrobenzene-d5	45			%	1	12/19/19	AW	40 - 140 %
% Phenol-d5	23			%	1	12/19/19	AW	15 - 110 %
% Terphenyl-d14	60			%	1	12/19/19	AW	40 - 140 %
<b><u>Semivolatiles</u></b>								
1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
1,2-Dichlorobenzene	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
1,2-Diphenylhydrazine	ND	5.0	5.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
1,3-Dichlorobenzene	ND	5.0	1.5	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
1,4-Dichlorobenzene	ND	5.0	1.5	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,4,5-Trichlorophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,4,6-Trichlorophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,4-Dichlorophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,4-Dimethylphenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,4-Dinitrophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,4-Dinitrotoluene	ND	5.0	2.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,6-Dichlorophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2,6-Dinitrotoluene	ND	5.0	1.6	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2-Chloronaphthalene	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2-Chlorophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2-Methylnaphthalene	ND	5.0	1.5	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2-Methylphenol (o-cresol)	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2-Nitroaniline	ND	10	5.1	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
2-Nitrophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
3&4-Methylphenol (m&p-cresol)	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
3,3'-Dichlorobenzidine	ND	5.0	2.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
3-Nitroaniline	ND	5.0	5.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4,6-Dinitro-2-methylphenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4-Bromophenyl phenyl ether	ND	5.0	1.5	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4-Chloro-3-methylphenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4-Chloroaniline	ND	5.0	2.3	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4-Chlorophenyl phenyl ether	ND	5.0	1.7	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4-Nitroaniline	ND	5.0	1.7	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
4-Nitrophenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Anthracene	ND	5.0	1.6	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzidine	ND	5.0	2.9	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzoic acid	ND	10	10	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzyl alcohol	ND	10	5.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Benzyl butyl phthalate	ND	5.0	1.3	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Bis(2-chloroethoxy)methane	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Bis(2-chloroethyl)ether	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Bis(2-chloroisopropyl)ether	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Bis(2-ethylhexyl)phthalate	ND	1.0	1.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Dibenzofuran	ND	1.0	1.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Diethyl phthalate	ND	5.0	1.6	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Dimethylphthalate	ND	5.0	1.6	ug/L	1	12/19/19	AW	E625.1/E625.1SIM

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Di-n-butylphthalate	ND	5.0	1.3	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Di-n-octylphthalate	ND	5.0	1.3	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Fluoranthene	ND	5.0	1.6	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Fluorene	ND	5.0	1.7	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Hexachloroethane	ND	1.0	1.0	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Isophorone	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Naphthalene	ND	5.0	1.4	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
N-Nitrosodi-n-propylamine	ND	5.0	1.6	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
N-Nitrosodiphenylamine	ND	5.0	1.9	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Phenol	ND	5.0	0.90	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
Pyrene	ND	5.0	1.7	ug/L	1	12/19/19	AW	E625.1/E625.1SIM
<b>QA/QC Surrogates</b>								
% 2,4,6-Tribromophenol	77			%	1	12/19/19	AW	15 - 130 %
% 2-Fluorobiphenyl	69			%	1	12/19/19	AW	30 - 130 %
% 2-Fluorophenol	35			%	1	12/19/19	AW	10 - 130 %
% Nitrobenzene-d5	63			%	1	12/19/19	AW	15 - 130 %
% Phenol-d5	25			%	1	12/19/19	AW	10 - 130 %
% Terphenyl-d14	70			%	1	12/19/19	AW	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level LOD=Limit of Detection  
MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

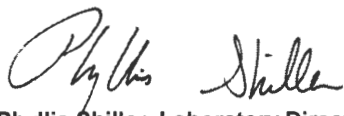
The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

#### **Semi-Volatile Comment:**

Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director







Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

December 24, 2019

FOR: Attn: Ms. Marcia J. Berger  
Clean Properties Inc.  
111 Boston Post Rd Suite 211  
Sudbury MA 01776

### Sample Information

Matrix: GROUND WATER  
Location Code: CLEANPROP  
Rush Request: 48 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: B  
Analyzed by: see "By" below

Date Time

12/17/19  
12/18/19 16:36

### Laboratory Data

SDG ID: GCE90154  
Phoenix ID: CE90155

Project ID: 515 SOMERVILLE AVE SOMERVILLE MA  
Client ID: EAST MW

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001		mg/L	1	12/20/19	EK	SW6010D
Arsenic	0.087	0.004		mg/L	1	12/20/19	EK	SW6010D
Cadmium	0.011	0.001		mg/L	1	12/20/19	EK	SW6010D
Chromium	0.142	0.001		mg/L	1	12/20/19	EK	SW6010D
Copper	1.29	0.005		mg/L	1	12/20/19	EK	SW6010D
Mercury	< 0.002	0.002		mg/L	1	12/19/19	RS	SW7470A
Nickel	0.142	0.001		mg/L	1	12/20/19	EK	SW6010D
Lead	2.19	0.020		mg/L	10	12/20/19	EK	SW6010D
Antimony	< 0.005	0.005		mg/L	1	12/20/19	EK	SW6010D
Selenium	< 0.010	0.010		mg/L	1	12/20/19	EK	SW6010D
Zinc	1.78	0.004		mg/L	1	12/20/19	EK	SW6010D
pH	7.49	1.00		pH Units	1	12/19/19 00:31	AP	SM4500-H B-11
Mercury Digestion	Completed					12/19/19	LS/LS	SW7470A
PCB Extraction	Completed					12/18/19		E608.3
Extraction for Pest (2 Liter)	Completed					12/18/19		E608.3
Semi-Volatile Extraction	Completed					12/19/19	C	E625.1
Total Metals Digestion	Completed					12/19/19	AG	

### Polychlorinated Biphenyls

PCB-1016	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1221	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1232	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1242	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1248	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1254	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1260	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1262	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3
PCB-1268	ND	0.071	0.071	ug/L	1	12/19/19	SC	E608.3



Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<b><u>QA/QC Surrogates</u></b>								
% DCBP	65			%	1	12/19/19	SC	30 - 150 %
% DCBP (Confirmation)	62			%	1	12/19/19	SC	30 - 150 %
% TCMX	78			%	1	12/19/19	SC	30 - 150 %
% TCMX (Confirmation)	71			%	1	12/19/19	SC	30 - 150 %
<b><u>Pesticides</u></b>								
4,4' -DDD	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
4,4' -DDE	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
4,4' -DDT	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
a-BHC	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
a-chlordane	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Aldrin	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
b-BHC	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Chlordane	ND	0.35	0.35	ug/L	5	12/19/19	CG	E608.3
d-BHC	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Dieldrin	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Endosulfan I	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Endosulfan II	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Endosulfan sulfate	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Endrin	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Endrin aldehyde	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Endrin ketone	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
g-BHC	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
g-chlordane	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Heptachlor	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Heptachlor epoxide	ND	0.070	0.070	ug/L	5	12/19/19	CG	E608.3
Methoxychlor	ND	0.70	0.70	ug/L	5	12/19/19	CG	E608.3
Toxaphene	ND	1.4	1.4	ug/L	5	12/19/19	CG	E608.3
<b><u>QA/QC Surrogates</u></b>								
% DCBP	107			%	5	12/19/19	CG	40 - 140 %
% DCBP (Confirmation)	111			%	5	12/19/19	CG	40 - 140 %
% TCMX	87			%	5	12/19/19	CG	40 - 140 %
% TCMX (Confirmation)	89			%	5	12/19/19	CG	40 - 140 %
<b><u>Acrolein, Acrylonitrile, 2 CEVE</u></b>								
2-Chloroethyl vinyl ether	ND	5.0	5.0	ug/L	1	12/18/19	MH	E624.1 As is
Acrolein	ND	5.0	1.0	ug/L	1	12/18/19	MH	E624.1 As is
Acrylonitrile	ND	5.0	0.50	ug/L	1	12/18/19	MH	E624.1 As is
<b><u>Volatiles</u></b>								
1,1,1-Trichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1,2,2-tetrachloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1,2-Trichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1-Dichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,1-Dichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,2-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,2-Dichloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,2-Dichloropropane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
1,3-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
1,4-Dichlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Benzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Bromodichloromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Bromoform	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Bromomethane	ND	0.50	0.50	ug/L	1	12/18/19	MH	E624.1
Carbon tetrachloride	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chlorobenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chloroethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chloroform	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Chloromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
cis-1,2-Dichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
cis-1,3-Dichloropropene	ND	0.40	0.25	ug/L	1	12/18/19	MH	E624.1
Dibromochloromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Ethylbenzene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
m&p-Xylene	ND	0.50	0.42	ug/L	1	12/18/19	MH	E624.1
Methyl tert-butyl ether (MTBE)	ND	1.0	0.50	ug/L	1	12/18/19	MH	E624.1
Methylene chloride	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
o-Xylene	ND	0.50	0.45	ug/L	1	12/18/19	MH	E624.1
Tetrachloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Toluene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
trans-1,2-Dichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
trans-1,3-Dichloropropene	ND	0.40	0.25	ug/L	1	12/18/19	MH	E624.1
Trichloroethene	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Trichlorofluoromethane	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
Vinyl chloride	ND	0.50	0.25	ug/L	1	12/18/19	MH	E624.1
<b><u>QA/QC Surrogates</u></b>								
% 1,2-dichlorobenzene-d4	100			%	1	12/18/19	MH	70 - 130 %
% Bromofluorobenzene	90			%	1	12/18/19	MH	70 - 130 %
% Dibromofluoromethane	114			%	1	12/18/19	MH	70 - 130 %
% Toluene-d8	104			%	1	12/18/19	MH	70 - 130 %

### **Semivolatiles by (SIM)**

Acenaphthene	ND	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Acenaphthylene	ND	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzo(a)anthracene	1.1	0.06	0.06	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzo(a)pyrene	1.1	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzo(b)fluoranthene	0.89	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzo(g,h,i)perylene	0.75	0.14	0.14	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzo(k)fluoranthene	0.96	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Chrysene	1.1	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Dibenz(a,h)anthracene	0.11	0.03	0.01	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Hexachlorobenzene	ND	0.09	0.09	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Hexachlorobutadiene	ND	0.14	0.14	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Hexachlorocyclopentadiene	ND	0.14	0.14	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Indeno(1,2,3-c,d)pyrene	0.93	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Nitrobenzene	ND	0.14	0.14	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
N-Nitrosodimethylamine	ND	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Pentachlorophenol	ND	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Phenanthrene	0.93	0.07	0.07	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Pyridine	ND	0.72	1.8	ug/L	1	12/20/19	WB	E625.1/E625.1SIM

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
<b><u>QA/QC Surrogates</u></b>								
% 2,4,6-Tribromophenol	85			%	1	12/20/19	WB	15 - 110 %
% 2-Fluorobiphenyl	62			%	1	12/20/19	WB	40 - 140 %
% 2-Fluorophenol	41			%	1	12/20/19	WB	15 - 110 %
% Nitrobenzene-d5	57			%	1	12/20/19	WB	40 - 140 %
% Phenol-d5	31			%	1	12/20/19	WB	15 - 110 %
% Terphenyl-d14	72			%	1	12/20/19	WB	40 - 140 %
<b><u>Semivolatiles</u></b>								
1,2,4-Trichlorobenzene	ND	7.2	2.2	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
1,2-Dichlorobenzene	ND	7.2	2.0	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
1,2-Diphenylhydrazine	ND	7.2	7.2	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
1,3-Dichlorobenzene	ND	7.2	2.1	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
1,4-Dichlorobenzene	ND	7.2	2.1	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,4,5-Trichlorophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,4,6-Trichlorophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,4-Dichlorophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,4-Dimethylphenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,4-Dinitrophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,4-Dinitrotoluene	ND	7.2	2.8	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,6-Dichlorophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2,6-Dinitrotoluene	ND	7.2	2.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2-Chloronaphthalene	ND	7.2	2.0	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2-Chlorophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2-Methylnaphthalene	ND	7.2	2.1	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2-Methylphenol (o-cresol)	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2-Nitroaniline	ND	14	7.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
2-Nitrophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
3&4-Methylphenol (m&p-cresol)	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
3,3'-Dichlorobenzidine	ND	7.2	3.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
3-Nitroaniline	ND	7.2	7.2	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4,6-Dinitro-2-methylphenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4-Bromophenyl phenyl ether	ND	7.2	2.1	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4-Chloro-3-methylphenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4-Chloroaniline	ND	7.2	3.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4-Chlorophenyl phenyl ether	ND	7.2	2.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4-Nitroaniline	ND	7.2	2.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
4-Nitrophenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Anthracene	ND	7.2	2.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzidine	ND	7.2	4.2	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzoic acid	ND	14	14	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzyl alcohol	ND	14	7.2	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Benzyl butyl phthalate	ND	7.2	1.9	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Bis(2-chloroethoxy)methane	ND	7.2	2.0	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Bis(2-chloroethyl)ether	ND	7.2	1.9	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Bis(2-chloroisopropyl)ether	ND	7.2	2.0	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Bis(2-ethylhexyl)phthalate	ND	1.4	1.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Dibenzofuran	ND	1.4	1.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Diethyl phthalate	ND	7.2	2.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Dimethylphthalate	ND	7.2	2.2	ug/L	1	12/20/19	WB	E625.1/E625.1SIM

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Di-n-butylphthalate	ND	7.2	1.9	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Di-n-octylphthalate	ND	7.2	1.9	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Fluoranthene	ND	7.2	2.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Fluorene	ND	7.2	2.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Hexachloroethane	ND	1.4	1.4	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Isophorone	ND	7.2	2.0	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Naphthalene	ND	7.2	2.1	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
N-Nitrosodi-n-propylamine	ND	7.2	2.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
N-Nitrosodiphenylamine	ND	7.2	2.8	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Phenol	ND	7.2	1.3	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
Pyrene	ND	7.2	2.5	ug/L	1	12/20/19	WB	E625.1/E625.1SIM
<b>QA/QC Surrogates</b>								
% 2,4,6-Tribromophenol	65			%	1	12/20/19	WB	15 - 130 %
% 2-Fluorobiphenyl	68			%	1	12/20/19	WB	30 - 130 %
% 2-Fluorophenol	37			%	1	12/20/19	WB	10 - 130 %
% Nitrobenzene-d5	52			%	1	12/20/19	WB	15 - 130 %
% Phenol-d5	24			%	1	12/20/19	WB	10 - 130 %
% Terphenyl-d14	77			%	1	12/20/19	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level LOD=Limit of Detection  
MDL=Method Detection Limit1

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

#### **Semi-Volatile Comment:**

Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

December 24, 2019

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



## **APPENDIX F:**

### **DEP METHOD 3 SHORTFORM AND DUST CALCULATION SHEETS**

**CALCULATION OF DUST EXPOSURE LIMITS**  
**Cancer - PCB Adult**

**RTN 3-36184**  
 515 Somerville Avenue  
 Somerville, Massachusetts  
 Project No. 6735

**Exposure Pathway 1 - Absorption through GI Tract (Carcinogen):**

$$EXP\ 1_c = \frac{[OHM] \cdot VR \cdot 1.5 \cdot RAF \cdot EF \cdot ED \cdot EP \cdot C_{4c} \cdot C_{5c}}{BW \cdot AP \cdot C_{6c}}$$

where:

[OHM] = soil concentration of contaminant (mg/kg)	=	1.9	Max Concentration
VR = ventilation rate (L/min)	=	20	Per Interim Final Policy #WSC/ORS-95-141
RAF = relative absorption factor = (dimensionless)	=	1	
EF = Exposure frequency (event/day)	=	1	
ED = exposure duration (hrs/event)	=	8	
EP = exposure period (years)	=	1	
C <sub>4c</sub> = conversion factor (m <sup>3</sup> /L)	=	1.00E-03	
C <sub>5c</sub> = conversion factor (min/hrs)	=	60	
BW = body weight (kg)	=	75	
AP = averaging period (years)	=	70	
C <sub>6c</sub> = conversion factor (mg/kg)	=	1.00E+06	

$$EXP\ 1_c = 5.21E-09\ m^3/kg\text{-}day$$

**Exposure Pathway 2 - Absorption through Lungs (Carcinogen):**

$$EXP\ 2_c = \frac{[OHM] \cdot 0.5 \cdot EF \cdot ED \cdot EP \cdot C_{1c} \cdot C_{2c} \cdot C_{3c}}{AP}$$

where:

C <sub>1c</sub> = conversion factor (ug/mg)	=	1.00E+03
C <sub>2c</sub> = conversion factor (days/hours)	=	4.17E-02
C <sub>3c</sub> = conversion factor (kg/mg)	=	1.00E-06

$$EXP\ 2_c = 4.52E-06\ mg/m^3$$

**Summation of Exposures**

$$PM_{10} = \frac{ELCR}{((EXP\ 1_c \cdot SF) + (EXP\ 2_c \cdot UR))}$$

where:

PM <sub>10</sub> = respirable particulate concentration in air (mg/m <sup>3</sup> )	
ELCR = Excess Lifetime Cancer Risk	= 1.00E-06
SF <sub>ORAL</sub> = Slope Factor (1/mg/kg/day))	= 2.00E+00
UR	= 1.00E-04

$$PM_{10} = 91.95\ mg/m^3$$



# **CALCULATION OF DUST EXPOSURE LIMITS**

**Cancer - PCB Child**

**RTN 3-36184**

515 Somerville Avenue; Somerville, MA

Project No. 6537

## **Exposure Pathway 1 - Absorption through GI Tract (Carcinogen):**

$$EXP\ 1_c = \frac{[OHM] * VR * 1.5 * RAF * EF * ED * EP * C4_c * C5_c}{BW * AP * C6_c}$$

where:

[OHM] = soil concentration of contaminant (mg/kg)	=	1.9	Max Concentration
VR = ventilation rate (L/min)	=	8.92	Per Interim Final Policy #WSC/OF
RAF = relative absorption factor = (dimensionless)	=	1	
EF = Exposure frequency (event/day)	=	1	
ED = exposure duration (hrs/event)	=	12	
EP = exposure period (years)	=	1	RAM duration
C4 <sub>c</sub> = conversion factor (m <sup>3</sup> /L)	=	1.00E-03	
C5 <sub>c</sub> = conversion factor (min/hrs)	=	60	
BW = body weight (kg)	=	10.8	
AP = averaging period (years)	=	70	
C6 <sub>c</sub> = conversion factor (mg/kg)	=	1.00E+06	

$$EXP\ 1_c = 2.42E-08\ m^3/kg-day$$

## **Exposure Pathway 2 - Absorption through Lungs (Carcinogen):**

$$EXP\ 2_c = \frac{[OHM] * 0.5 * EF * ED * EP * C1_c * C2_c * C3_c}{AP}$$

where:

C1 <sub>c</sub> = conversion factor (ug/mg)	=	1.00E+03
C2 <sub>c</sub> = conversion factor (days/hours)	=	4.17E-02
C3 <sub>c</sub> = conversion factor (kg/mg)	=	1.00E-06

$$EXP\ 2_c = 6.79E-06\ mg/m^3$$

## **Summation of Exposures**

$$PM_{10} = \frac{ELCR}{((EXP\ 1_c * SF) + (EXP\ 2_c * UR))}$$

where:

PM <sub>10</sub> = respirable particulate concentration in air (mg/m <sup>3</sup> )	
ELCR = Excess Lifetime Cancer Risk	= 1.00E-06
SF <sub>ORAL</sub> - Slope Factor (1/mg/kg/day))	= 2.00E+00
UR	= 1.00E-04

$$PM_{10} = 20.37\ mg/m^3$$

# **CALCULATION OF DUST EXPOSURE LIMITS**

**Non Cancer - PCB Adult**

**RTN 3-36184**

515 Somerville Avenue;  
Somerville, Massachusetts  
Project No. 6735

## **Exposure Pathway 1 - Absorption through GI Tract:**

$$EXP\ 1 = \frac{[OHM] * VR * 1.5 * RAF * EF * ED * EP * C1_{NC} * C2_{NC}}{BW * AP * C3_{NC}}$$

where:

[OHM] = soil concentration of contaminant (mg/kg)	=	1.9	Max Concentration
VR = ventilation rate (L/min)	=	20	Per Interim Final Policy #WSC/OR:
RAF = relative absorption factor = (dimensionless)	=	1	
EF = Exposure frequency (event/day)	=	1	
ED = exposure duration (hrs/event)	=	8	
EP = exposure period (years)	=	1	RAM duration
C1 <sub>NC</sub> = conversion factor (m <sup>3</sup> /L)	=	1.00E-03	
C2 <sub>NC</sub> = conversion factor (min/hrs)	=	60	
BW = body weight (kg)	=	75	
AP = averaging period (years)	=	70	
C3 <sub>NC</sub> = conversion factor (mg/kg)	=	1.00E+06	

$$EXP\ 1 = 5.21E-09\ m^3/kg-day$$

## **Exposure Pathway 2 - Absorption through Lungs:**

$$EXP\ 2 = \frac{[OHM] * 0.5 * EF * ED * EP * C4_{NC} * C5_{NC}}{AP}$$

where:

C4 <sub>NC</sub> = conversion factor (days/hour)	=	0.041667
C5 <sub>NC</sub> = conversion factor (kg/mg)	=	1.00E-06

$$EXP\ 2 = 4.52E-09\ mg/m^3$$

## **Summation of Exposures**

$$PM_{10} = \frac{HI}{\frac{EXP\ 1}{RfD_{oral}} + \frac{EXP\ 2}{RfC}}$$

where:

PM <sub>10</sub> = respirable particulate concentration in air (mg/m <sup>3</sup> )	
HI = Target Hazard Index (dimensionless)	= 1
RfD <sub>oral</sub> = Reference Dose Concentration (mg/kg/day)	= 2.00E-05
RfC = Reference Concentration (mg/m <sup>3</sup> )	= 2.00E-05

$$PM_{10} = 2054.39\ mg/m^3$$

**CALCULATION OF DUST EXPOSURE LIMITS**  
**Non Cancer - PCB Child**

**RTN 3-36184**  
 515 Somerville Avenue  
 Somerville, Massachusetts  
 Project No. 6735

**Exposure Pathway 1 - Absorption through GI Tract**

$$EXP 1 = \frac{[OHM] * VR * 1.5 * RAF * EF * ED * EP * C1_{NC} * C2_{NC}}{BW * AP * C3_{NC}}$$

where:

[OHM] = soil concentration of contaminant (mg/kg)	=	1.9	Max Concentration
VR = ventilation rate (L/min)	=	8.92	Per Interim Final Policy #WSC/OR
RAF = relative absorption factor = (dimensionless)	=	1	
EF = Exposure frequency (event/day)	=	1	
ED = exposure duration (hrs/event)	=	8	
EP = exposure period (years)	=	1	RAM Duration
C1 <sub>NC</sub> = conversion factor (m <sup>3</sup> /L)	=	1.00E-03	
C2 <sub>NC</sub> = conversion factor (min/hrs)	=	60	
BW = body weight (kg)	=	10.8	Child
AP = averaging period (years)	=	70	
C3 <sub>NC</sub> = conversion factor (mg/kg)	=	1.00E+06	

$$EXP 1 = 1.61E-08 \text{ m}^3/\text{kg-day}$$

**Exposure Pathway 2 - Absorption through Lungs:**

$$EXP 2 = \frac{[OHM] * 0.5 * EF * ED * EP * C4_{NC} * C5_{NC}}{AP}$$

where:

C4 <sub>NC</sub> = conversion factor (days/hour)	=	0.041667
C5 <sub>NC</sub> = conversion factor (kg/mg)	=	1.00E-06

$$EXP 2 = 4.52E-09 \text{ mg/m}^3$$

**Summation of Exposures**

$$PM_{10} = \frac{HI}{\frac{EXP 1}{RfD_{oral}} + \frac{EXP 2}{RfC}}$$

where:

PM <sub>10</sub> = respirable particulate concentration in air (mg/m <sup>3</sup> )			
HI = Target Hazard Index (dimensionless)	=	0.2	Child
RfD <sub>oral</sub> = Reference Dose Concentration (mg/kg/day)	=	2.0E-05	
RfC = Reference Concentration (mg/m <sup>3</sup> )	=	2.0E-05	

$$PM_{10} = 193.57 \text{ mg/m}^3$$

**Construction Worker - Soil: Table CW-1**  
**Exposure Point Concentration (EPC) and Risk**  
**Based on Construction Worker 18-25 years of age**

ShortForm Version 10-12

Vlookup Version v0315

**\*\*Do not insert or delete any rows\*\***

Click on empty cell below and select OHM using arrow.

ELCR (all chemicals) = 1.4E-07

HI (all chemicals) = 1.1E-01

Oil or Hazardous	EPC	ELCR	ELCR	ELCR	ELCR		Subchronic				
Material (OHM)	(mg/kg)	ingestion	dermal	inhalation GI	inhalation pulmonary	ELCR <sub>total</sub>	HQ <sub>ing</sub>	HQ <sub>derm</sub>	HQ <sub>inh-GI</sub>	HQ <sub>inh</sub>	HQ <sub>total</sub>
POLYCHLORINATED BIPHENYLS (PCBs)	1.9E+00	6.7E-08	6.7E-08	4.3E-09	2.5E-10	1.4E-07	4.7E-02	4.7E-02	3.0E-03	8.8E-03	1.1E-01

## Construction Worker - Soil: Table CW-2

### Equations to Calculate Cancer Risk for Construction Worker

Vlookup Version v0315

#### Cancer Risk from Ingestion

$$ELCR_{ing} = LADD_{ing} * CSF_{oral}$$

$$LADD_{ing} = \frac{EPC * IR * RAF_{c-ing} * EF * ED_{ing} * EP * C1}{BW * AP_{lifetime}}$$

#### Cancer Risk from Dermal Absorption

$$ELCR_{derm} = LADD_{derm} * CSF_{oral}$$

$$LADD_{derm} = \frac{EPC * SA * AF * RAF_{c-derm} * EF * ED_{derm} * EP * C1}{BW * AP_{lifetime}}$$

#### Cancer Risk from Particulate Inhalation - Gastrointestinal Absorption

$$ELCR_{inh-GI} = LADD_{inh-GI} * CSF_{oral}$$

$$LADD_{inh-GI} = \frac{EPC * RCAF_{inh-gi} * PM_{10} * VR_{work} * RAF_{c-ing} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{lifetime}}$$

#### Cancer Risk from Particulate Inhalation - Pulmonary Absorption

$$ELCR_{inh} = LADD_{inh} * CSF_{inhalation}$$

$$LADD = \frac{EPC * RCAF_{inh} * PM_{10} * VR_{work} * RAF_{c-inh} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{lifetime}}$$

Parameter	Value	Units
CSF	OHM-specific	(mg/kg-day) <sup>-1</sup>
LADD	age/OHM-specific	mg/kg-day
EPC	OHM-specific	mg/kg
IR	100	mg/day
RAF <sub>c-ing</sub>	OHM-specific	dimensionless
RAF <sub>c-derm</sub>	OHM-specific	dimensionless
RAF <sub>c-inh</sub>	OHM-specific	dimensionless
EF	0.714	event/day
ED <sub>ing &amp; derm</sub>	1	day/event
ED <sub>inh</sub>	0.333	day/event
EP	365	days
C1	1.0E-06	kg/mg
C2	1.0E-09	kg/μg
C3	1440	min/days
C4	1.0E-03	m <sup>3</sup> /L
BW	58.0	kg
AP <sub>(lifetime)</sub>	25,550	days
VR <sub>work</sub>	60	L/min
AF	0.29	mg/cm <sup>2</sup>
SA	3473	cm <sup>2</sup> /day
RCAF <sub>inh-gi</sub>	1.5	dimensionless
RCAF <sub>inh</sub>	0.5	dimensionless
PM <sub>10</sub>	150	μg/m <sup>3</sup>

## Construction Worker - Soil: Table CW-3

### Equations to Calculate Noncancer Risk for Construction Worker

Vlookup Version v0315

#### Noncancer Risk from Ingestion

$$HQ_{ing} = \frac{ADD_{ing}}{RfD_{oral-subchronic}}$$

$$ADD_{ing} = \frac{EPC * IR * RAF_{nc-ing} * EF * ED_{ing} * EP * C1}{BW * AP_{noncancer}}$$

#### Noncancer Risk from Dermal Absorption

$$HQ_{derm} = \frac{ADD_{derm}}{RfD_{oral-subchronic}}$$

$$ADD_{dermal} = \frac{EPC * SA * AF * RAF_{nc-derm} * EF * ED_{dermal} * EP * C1}{BW * AP_{noncancer}}$$

#### Noncancer Risk from Particulate Inhalation - Gastrointestinal Absorption

$$HQ_{inh-GI} = \frac{ADD_{inh-GI}}{RfD_{oral-subchronic}}$$

$$ADD_{inh-GI} = \frac{EPC * RCAF_{inh-gi} * PM_{10} * VR_{work} * RAF_{nc-ing} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{noncancer}}$$

#### Noncancer Risk from Particulate Inhalation - Pulmonary Absorption

$$HQ_{inh} = \frac{ADD}{RfD_{inhalation-subchronic}}$$

$$ADD_{inh} = \frac{EPC_{soil} * RCAF_{inh} * PM_{10} * VR_{work} * RAF_{nc-inh} * EF * ED_{inh} * EP * C2 * C3 * C4}{BW * AP_{noncancer}}$$

Parameter	Value	Units
RfD	OHM-specific	mg/kg-day
ADD	OHM-specific	mg/kg-day
EPC	OHM-specific	mg/kg
IR	100	mg/day
RAF <sub>nc-ing</sub>	OHM-specific	dimensionless
RAF <sub>nc-derm</sub>	OHM-specific	dimensionless
RAF <sub>nc-inh</sub>	OHM-specific	dimensionless
EF	0.714	event/day
ED <sub>ing &amp; derm</sub>	1	day/event
ED <sub>inh</sub>	0.333	day/event
EP	365	days
C1	1.0E-06	kg/mg
C2	1.0E-09	kg/μg
C3	1440	min/days
C4	1.0E-03	m <sup>3</sup> /L
BW	58.0	kg
AP <sub>noncancer</sub>	365	days
VR <sub>work</sub>	60	L/min
AF	0.29	mg/cm <sup>2</sup>
SA	3473	cm <sup>2</sup> /day
RCAF <sub>inh-gi</sub>	1.5	dimensionless
RCAF <sub>inh</sub>	0.5	dimensionless
PM10	150	μg/m <sup>3</sup>

## Construction Worker - Soil: Table CW-4

### Definitions and Exposure Factors

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Parameter	Value	Units	Notes
ELCR - Excess Lifetime Cancer Risk	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal, inh=inhilation)
HI - Hazard Index	chemical specific	dimensionless	Pathway specific (ing =ingestion, derm=dermal, inh=inhilation)
CSF - Cancer Slope Factor	chemical specific	(mg/kg-day) <sup>-1</sup>	see Table CW-5.
RfD - Reference Dose	chemical specific	mg/kg-day	see Table CW-5.
LADD - Lifetime Average Daily Dose	chemical specific	mg/kg-day	Pathway specific. See Table CW-2.
ADD - Average Daily Dose	chemical specific	mg/kg-day	Pathway specific. See Table CW-3.
EPC - Exposure Point Concentration	chemical specific	mg/kg	see Table CW-1.
IR - Soil Ingestion Rate	100	mg/day	MADEP. 2002. Technical Update: Calculation of an Enhanced Soil Ingestion Rate. ( <a href="http://www.mass.gov/dep/ors/orspubs.htm">http://www.mass.gov/dep/ors/orspubs.htm</a> ).
RAF <sub>c</sub> - Relative Absorption Factor for Cancer Effects	chemical specific	dimensionless	Pathway specific - see Table CW-5.
RAF <sub>nc</sub> - Relative Absorption Factor for Noncancer Effects	chemical specific	dimensionless	Pathway specific - see Table CW-5.
EF - Exposure Frequency	0.714	event/day	5 events (days) / 7 events (days) in a week; MADEP 1995 Guidance for Disposal Site Risk Characterization pg B-38.
ED <sub>ing,derm</sub> - Exposure Duration for ingestion or dermal exposure	1	day/event	
ED <sub>inh</sub> - Exposure Duration for inhalation exposure	0.333	day/event	Represents 8 hours / event.
EP - Exposure Period	365	days	6 months; MADEP 1995 Guidance for Disposal Site Risk Characterization.
BW - Body Weight	58.0	kg	U.S. EPA. 1997. Exposure Factors Handbook. Table 7-7, Females, ages 18 - 25.
AP <sub>(lifetime)</sub> - Averaging Period for lifetime	25,550	days	Represents 70 years
AP <sub>(noncancer)</sub> - Averaging Period for noncancer	365	days	6 months; MADEP 1995 Guidance for Disposal Site Risk Characterization.
AF - Adherence Factor	0.29	mg/cm <sup>2</sup>	MA DEP. 2002 Technical Update: Weighted Skin-Soil Adherence Factors. ( <a href="http://www.mass.gov/dep/ors/orspubs.htm">http://www.mass.gov/dep/ors/orspubs.htm</a> )
VR <sub>work</sub> - Ventilation Rate during work (heavy exertion)	60	L/min	Table B-4 MADEP 1995 Guidance for Disposal Site Risk Characterization.
SA - Surface Area	3473	cm <sup>2</sup> /day	MADEP. 1995. Guidance for Disposal Site Risk Characterization. 50th percentile for females. Appendix Table B-2.
IFAF <sub>inh-gi</sub> - Ingestion Fraction Adjustment Factor, gastrointestinal	1.5	dimensionless	MADEP 2007. Characterization of Risks Due to Inhalation of Particulates by Construction Workers
IFAF <sub>inh</sub> - Inhalation Fraction Adjustment Factor, inhalation	0.5	dimensionless	MADEP 2002. Characterization of Risks Due to Inhalation of Particulates by Construction Workers
PM10 - Concentration of PM <sub>10</sub>	150	µg/m <sup>3</sup>	MADEP 1995 Guidance for Disposal Site Risk Characterization pg B-11

Construction Worker - Soil: Table CW-5  
Chemical-Specific Data

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Oil or Hazardous Material	Oral CSF (mg/kg-day) <sup>-1</sup>	RAF <sub>c-ing</sub>	RAF <sub>c-derm</sub>	RAF <sub>c-inh</sub>	Inhalation CSF (mg/kg-day) <sup>-1</sup>	Subchronic Oral RfD mg/kg-day	Subchronic RAF <sub>nc-ing</sub>	Subchronic RAF <sub>nc-derm</sub>	Subchronic RAF <sub>nc-inh</sub>	Subchronic Inhalation RfD
POLYCHLORINATED BIPHENYLS (PCBs)	2.0E+00	1	0.1	1	3.5E-01	5.0E-05	1	0.1	1	5.7E-06